

# **HISTORY AND ARCHAEOLOGY OF INDIA'S CONTACTS WITH OTHER COUNTRIES FROM EARLIEST TIMES TO 300 B.C.**

**SHASHI ASTHANA, Ph.D.**  
National Museum, New Delhi

*Foreword by*  
**S. P. GUPTA**



**B. R. PUBLISHING CORPORATION  
DELHI**

PREPUBLICATION CATALOGING : IFLA STANDARDS : ISBD(M)

P. V. 33

Asthana, Shashi Prabha, 1947-

History and archaeology of India's contacts with other countries, from earliest times to 300 B.C. / Shashi Asthana ; foreword by S.P. Gupta. — Delhi : B.R. Pub. Corp. ; New Delhi : distributors, D.K. Publishers' Distributors, 1976.

xxvii, 275, [68] p. : ill., maps ; 26 cm.

A revision of the authoress' thesis, Magadh University, 1976, under title: India and the ancient world; a study in cultural relations from 3000 B.C. to 300 B.C.

Includes footnotes and index.

Bibliography: p. [227]-252.

Rs125.00 (\$25.00)

1. India—Antiquities—Early to 324 B.C. 2. India—History—Early to 324 B.C. 3. Anthropology, Prehistoric. I. Title. II. Title: India and the ancient world; ..., 3000 B.C. to 300 B.C.

913.34033

V44:71.C.

L6

1976 अस्थाना शशी प्रभा दिल्ली एस्टेट्स डीके-76जे-4789

21/2/77 अस्थाना शशी 127390 History C  
Vol: 76 C L6:

First Published 1976

© SHASHI PRABHA ASTHANA, b. 1947

Published by

B. R. PUBLISHING CORPORATION  
461, Vivekanand Nagar, Delhi-110052

Distributed by

D. K. PUBLISHERS' DISTRIBUTORS  
1, Ansari Road, Daryaganj, New Delhi-110002, Phone : 274819

PRINTED BY

VISHAL PRINTERS, ROOP NAGAR, DELHI-110007

*To  
my parents  
and  
my guru  
Dr. S. P. Gupta*

## FOREWORD

It is with a certain amount of hesitation in my mind that I agreed to write the foreword to this book. First of all, the span of time and diversity of cultures treated here has been so vast that I doubt except for Prof. Sankalia no one in this country would have even thought of taking up such a challenging subject for study, and, therefore, I was rather taken aback to see this work by a young scholar, although extremely brilliant with first class career. Moreover, at least for three years, I have so closely watched her collecting data with a rare passion and discussing with equally rare passion some of the oft-quoted theories with me, with which I radically differed, that I feared I might become a serious victim of the luxury of my own fads. However, once it has become inescapable, let me become a little unorthodox while writing these words.

I feel that there is an inherent danger in dealing with a subject like this : one starts with the presumption that there has been a close contact between different countries in the world in all periods of history and one's job is to find out every kind of evidence to buttress this presumption. In the process, sometimes one becomes indiscriminate. With all apologies, let me quote a few well-known authors and their theories to make my point clear, atleast in the context of India since in spite of several reassessments of their views they have rarely thought it fit to modify them. I start with no less an authority than Sir Mortimer Wheeler who is, in a sense, rightly called the Father of Modern Techniques of Archaeological Excavations and Explorations. Is it not a fact that even when studies made by A. Ghosh, B.B. Lal, N.R. Banerjee, B.K. Thapar, M.R. Mughal, D.P. Agrawal, K.K. Sinha, J.P. Joshi, K.N. Dikshit, C.C. Lamberg-Karlovsky, M.K. Dhavalikar and, to some extent, myself, have directly or indirectly questioned the amount of weight given to various pieces of evidence in favour of his favourite dictum 'ideas have wings' in the context of his efforts to search out the roots of Harappan urbanism in Mesopotamian townships, or Indian iron technology in the Achaemenid furnaces, or the end of the Harappan cities in the vandalism of the armies of the Vedic Aryans, or the identification of the Vedic Aryans with the 'Cemetery H' people he, like a very good member of the Conservative Party, sticks to his old gun ? F.R. Allchin's reliance on a burnished grey ware from Shah Tepe in Iran and terracotta head-rests from T. Narsipur in south India as proofs of Irano-Indian and Indo-Egyptian contacts respectively may also be mentioned in this context. H.D. Sankalia's evaluation of the zoomorphic vessels from Nevasa, spouted vessels and stemmed goblets from Navdatoli, Chandoli

and Jorwe, clay beads with incised designs from Ahar, mother-goddess figurines from Nevasa, bull-with-women from Inamgaon, strap-handled vessels from Saipai, typology of pots and pans of the 'Cemetery H' people, etc., as sufficient proof of Indo-West Asian contacts are equally relevant to the point I am trying to make here. S.R. Rao's views on copper ingots and Reserved Slip Ware sherds from Lothal and the origin of the Harappan Script in the context of Indo-West Asian relations are also too well-known to elaborate here. L.S. Leshnik's theory of Central Asian origin of the Indian megalith builders, called 'pastoral nomadics' by him, also deserves a reference here. A.H. Dani's efforts to correlate the Gandhara Graves to the Rigvedic Aryans is equally illustrative of this point. Buddha Prakash's identification of many of the places mentioned in the Indian epics in areas far removed from the Indian mainland just on the basis of 'place-name similarity' may equally not be out of place to mention. I need not recapitulate various theories connected with the origin of the Brāhmī script, and the origin of the 'idea' of the Aśokan Pillars and also some of the motifs occurring on their abacus since they are familiar to every student of Indian history and archaeology. And let me not spare myself also since I have equally been guilty of putting too much weight in favour of diffusionists; at a given opportunity I will myself radically reassess my own theories connected with the Indo-Central Asian contacts during the Stone Age and Harappan times, and Indo-Gulf of Oman relations during the megalithic times. I might like to quote a line from a letter I have just now received from Dilip K. Chakrabarty, now on a teaching assignment at the University of Cambridge, : "Each time I check a theory on West Asiatic affinity of something Indian in detail I find it very unconvincing" : since it sums up most of my thinking at the moment, although this is also an extreme view and needs moderation in the light of some recent and some old discoveries, particularly of seals and sealings.

We are passing through a period of transition in the field of archaeological studies. If I have to identify the main currents of this transition I would do like this:

In the field of prehistory the days of typologists are gone and great reliance is now placed on the pure sciences. The birth and growth of the Indian Prehistoric Society and its successor the Indian Society for Prehistoric and Quaternary Studies during the last four years, the Congress of Archaeological and Anthropological Sciences held at Chandigarh in December 1975, and a workshop seminar on Palaeoclimate and Archaeology with the active participation of geologists, meteorologists, hydrologists, physicists, geographers, archaeologists, anthropologists and others, and the writings of scholars like R.V. Joshi, K.V. Soundararajan, V.S. Wakankar, V.N. Mishra, S.N. Rajguru, A.P. Khatri, Asoka Ghosh and others conclusively prove that only multi-disciplinary frame-work is going to hold the ground in future.

'In the field of protohistory, a vigorous rethinking on the theories involving

long-distance diffusion is going on. Also, the problems which only casually engaged our attention in the past are now becoming our main concern, e.g., social structure, economic process, settlement pattern, colonization, urbanization and metallurgy.

In the field of historical archaeology, in some quarters at least, town-planning is being given preference over many other aspects of culture; I gather that the author of this work who once wrote a paper with me on this subject is going to take it up for a very detailed work, collaborating with other scholars also who have themselves done a lot of field-work in West Asia. In the sphere of 'tradition and archaeology', new multi-disciplinary approaches proposed by H.D. Sankalia, B.B. Lal, B.P. Sinha, R.S. Sharma, Romila Thapar, B.M. Pande, B.D. Chattopadhyaya, K.S. Ramachandran and others are being frankly talked about. In the subjects of art and architecture, recent seminars organized by Prof. G.C. Pande, Vice-chancellor of the Rajasthan University, Jaipur, and reassessment of various old theories made by scholars like, Nihar Ranjan Ray, G.R. Sharma, M.N. Deshpande, S.B. Deo, H. Sarkar, S. Gorakshakar, M.K. Dhakey, Debala Mitra, M.C. Joshi, John Irwin and others are greatly influencing the views of all serious scholars. The contents of the *Purātattva*, a Bulletin of the Indian Archaeological Society and publications of recently held seminars organized by D.P. Agrawal give ample proof of the directional changes occurring in Indian archaeological studies these days.

Now, what role Dr. Shashi Asthana is going to play in this period of transition since she belongs to the youngest generation of archaeologists in India? As a first necessary step, she has taken a complete stock of things—whatever significant has been said and done till the fall of April 1976 on the subject of this book has been, more or less, incorporated here; no reader, I am sure, will miss this point. Similarly, while evaluating the historical and archaeological evidence in the concluding paragraphs of each chapter she has shown the rare qualities of a mature historian—objectivity, moderation and caution. On both the counts, therefore, the work should be taken as the masterly analysis of the subject matter dealt with. But, what is next?... For the last three years her face has become so familiar in all archaeological conferences in this country that each time she comes on the dias we expect listening to an extremely self-assured scholar who step by step unfolds the logic of her thesis with the help of well prepared illustrations. As said earlier, at the moment she is working on Harappan town-planning vis-a-vis Mesopotamian town-planning, but, I hope, she will also take up several other aspects of urban life for a detailed comparative study. I have great hopes from her and other comparatively younger scholars and I am sure they were justify my expectations.

## O P I N I O N

*Dr. Shashi Prabha Asthana's book on 'History and Archaeology of India's Contacts with Other Countries' from the Palaeolithic times to about 300 B.C. is the first endeavour of its kind to present the evidence in comprehensive manner. It is a very valuable publication which will surely open up avenues of several lines of research and it will be a reference book for every student of archaeology in general and Indian archaeology in particular. The fairly large bibliography will be of help to general readers as well as to research scholars. It is a welcome addition to the comparatively slender ensemble of books on Indian archaeology.*

New Delhi  
10-6-1976

N.R. Banerjee  
Director  
National Museum  
New Delhi.

## AUTHOR'S PREFACE

The present work was started a long time back, in 1965, when I was awarded University Grants Commission's Fellowship for higher studies. For certain reasons beyond my control, such as the physical illness and my joining the staff of the National Museum, New Delhi, and also the vastness of the subject taken up for research work, it has taken much longer time than what it would have taken otherwise. But I do not regret, it has only improved the work, although there is always enough scope to add more details and views and also enlarge the framework since archaeology, the primary source of most of the material, dealt with here, is an ever-expanding subject. I would just quote one.

To begin with, we have taken the stand in this monograph on the basis of recent anthropological discoveries that the early man originated in eastern Africa from where he moved in Asia, including India. In this connection we may make it clear that that by 'early man' we did not mean *australopithecines* alone, we include a distinctly *homo* genus which in point of time ran parallel to the former in one and the same geographical locale and whose remains, about 150 bones, have been found by Richard Leakey and Lord Zuckerman and others in Lake Rudolf area in Kenya and Omo Valley in Ethiopia. An ankle bone from the former site, dated to 1.5 to 2.6 million years, has features similar to modern man. But recently a news item has been published which tries to suggest that it may not be as simple as that and that the claim of Asia as the cradle of man cannot completely be brushed aside. It is as follows :

"Two scientists of the U.S. Government's National Institute of Health say that man originated millions of years ago in Asia and not in Africa.

Mr. Raoul Benveniste and George Todaro say that despite fossil data collected in Africa by anthropologists like Louis and Mary Leakey they are convinced man originated in Asia and only one to three million years ago he came to Africa.

Their theory is based on similarities in viral genes of man and Asian primates such as orangutan, gibbon and macaque. Man's viral genes are quite different from those of the African primates, such as the gorilla and chimpanzee.

The African gorilla and chimpanzee, they say, were close relatives of man in the scheme of evolution but the man-like creatures that left fossils in Africa were part of a line that died out. Offshoots whose progeny have not endured

to the present "man" diverged from the next closest relative, the orangutan, 18 million years ago, they say." Our only comments is 'wait and watch'.

While doing the work, I received valuable guidance from a number of scholars, institutions and libraries and I consider it my privilege to acknowledge their courtesy with all the humility I possess. To begin with, Dr. K.K. Thaplyal deserves my utmost sense of gratitude for initiating me into the historical part of the subject, and also taking great pains in organizing my early efforts in preparing the research monograph, I worked upon during the Fellowship period and also a little beyond. To Dr. Sachchidananda Sahai, I can never be adequately thankful since he went through the entire manuscript and gave valuable suggestions to improve the text for the doctoral degree. I have utilised the material contained in the thesis for the present publication for which I am grateful to the authorities of the Magadha University.

I shall never be able to find adequate words in my life to express my deep sense of gratitude to my *guru*, Dr. S.P. Gupta, of the National Museum, who not only initiated me in the study of Pre-and Protohistory but also showed me the way to reach the vast reservoir of the world of archaeology. He, in fact, infused life in the body of the book. But for his constant guidance and personal attention at every stage of its preparation, the work would not have seen the light of the day. I am deeply beholden to him for one more act of grace: he has written the Foreword of this book, which for quite sometime he did not like to do, of course in his usual humility.

To Dr. N. R. Banerjee, Director, National Museum, I am extremely thankful for writing his valuable opinion on this work. He is a distinguished Indian archaeologist and his opinion will always count for me.

Those well known scholars who have additionally helped me by giving me the benefit of their specialized knowledge during several rounds of discussions are Prof. H.D. Sankalia, Prof. B.B. Lal, Prof. R.K. Dikshit, Prof. B.P. Sinha, Dr. U.V. Singh, Dr. V.N. Misra, Dr. D.P. Agrawal, Shri B.K. Thapar and Dr. Sita Ram Rai. To each one of them I owe my sincerest thanks. I am also thankful to my various friends and colleagues in the National Museum, New Delhi. University of Lucknow, University of Magadha and other institutions, who have helped me in various ways from going through the manuscript to proof-reading and from preparing the illustrations to Index-making. Still, I would like to mention the name of Dr. V.P. Dwivedi, who did his utmost in this direction. To Dr. B.N. Sharma, Dr. G.N. Pant, Shri K.S. Ramachandran, Shri K.N. Dikshit, Mrs. Krishna Lal, Lala Aditya Narain, Shri B.M. Pande, Dr. (Miss) Chhaya Bhattacharya, Shri S.P. Tiwari, Shri S.K. Bhattacharya, Dr. Kamla Chauhan, Dr. K.S. Saxena, Dr. Y.B. Singh, Dr. Y.K. Mishra, Sri Mankapore and Shri Bhagwan Singh also, owe my sincere thanks, since from time to time each one of them gave me helpful suggestions to improve the work. For illustrations in the book the author acknowledges the courtesy of Shri M.N.

Deshpande, Archaeological Survey of India, New Delhi, Prof. H.D. Sankalia and Dr. S.B. Deo, Deccan College, Poona, Drs. N.R. Banerjee and P. Banerjee, National Museum, New Delhi, Dr. John Irwin and Miss Margaret Hall, Victoria and Albert Museum, London.

I pay my deep sense of gratitude to John Irwin and Miss Margaret Hall for giving me permission to reproduce the line drawings of the Mauryan Pillars and other objects they prepared for their articles on 'Aśokan Pillars' published in the *Burlington Magazine*.

Of the several libraries, I have consulted, the Central Archaeological Library, New Delhi, should be mentioned first for its excellent collection of publications. Shri Bhagwat Sahi was always there to bring out any book I needed and so also Shri Chandra Mohan Srivastava, his immediate boss. Shri Bal Krishan, Shri Ghanendar Singh and Shri Bholla Datta of the National Museum Library equally deserve my sincere thanks for providing me the library facilities. The members of the staff of the Library of the University of Lucknow were also extremely helpful to me for years together, for which I shall ever remember them. To Late Shri B.P. Asthana, and Sarvashri R. Chatterji and M.S. Mani of the Archaeological Survey of India and Sarvashri S.P. Nanda, Amrik Singh, I. Shah and Mohan Lal of the National Museum, I owe my utmost thanks for preparing the photographs and drawings.

I am at a loss to find proper words to express my feelings towards my parents, Shri B.L. Asthana, Advocate, and Smt. Suraj Mukhi, as also my brothers and bhabhis, who have during all these years not only inspired me to work but also kept me free from the household duties by taking all burdens on their heads. Similarly, I am deeply indebted to my fast friends Shri I.M. Sharma and his wife, Mrs. Meena Sharma, Ravi Kant Srivastava and Mrs. Meera Srivastava for the most treasured affection that they have showered on me for all these long years.

To my friend Dr. Shayma Rani, who always took all possible care to enable me to complete this work in the University hostel and outside I owe so much that all words are inadequate to express my emotion. So is true of my Pratima di and her husband Narain Dube.

To my younger brothers Bhanu, Amarendra, Vinod and Aroka, who have done a lot for me, I owe my affectionate regards.

To Shri B.B. Datta I shall always remain grateful for typing out the manuscript so accurately and so neatly.

I am particularly thankful to the publishers who have done the job in a friendly manner.

Inspite of all this many mistakes have crept in for which I am alone to be blamed. Still I crave for the indulgence of my readers.

National Museum,  
New Delhi.

Shashi Asthana

## ERRATA

Page	Para	Line	As Printed	To be read
10	First	6	(Fig. 5) (Afghanistan)	(Fig. 5A) (Afghanistan)
10	First	8		(Fig. 5 B).
10	First	8	(Pakistan)	(Pakistan) (Fig. 7B).
11	First	Last line of the First Para	(Fig. 7)	(Fig. 7A)
46	Last	3rd from the bottom	Stone Sculptures	Stone Sculptures also. The same example from Lothal
64	Last	Last		Last line should be deleted
65	F.N. 1	Last but one	Pl. XXI, Fig. 5.1	Fig. 39 A
65	F.N. 1	Last line	Pl. XXI, Fig. 5.2	Fig. 39 B
72	—	First line	Fig. 53	Fig. 43

# CONTENTS

## *Abbreviations*

## *Illustrations*

- Introduction :** General—1, Scope of work—2, Source Material—2, Previous Work—2, Periodization—3-5.
- Chapter I :** *The Period of Stone Age Cultures* : 6-13.  
Old Stone Age—6, Middle Stone Age—9, The Problem of Upper Palaeolithic—10, Late Stone Age—11, Conclusion—12-13.
- Chapter II :** *The Period of Pre-Harappan Village Cultures of Baluchistan and Sind* : 14-36.  
General—14, Previous work—18, Mundigak evidence—20, Quetta Culture—21, Gumla Culture—25, Kot Diji Culture—26, Zhob Culture—27, Amri-Nal Culture—29, Kulli Culture—32, Conclusion—35-36.
- Chapter III :** *The Period of Harappa Culture* : 37—70.  
Harappan sites—37, West Asian sites—38, Town Planning and Architecture—40, Pottery—41, Terracotta figurines—45, Animal figures—47, Implements and other objects—48, Seals and Sealings—51, Weights and Measures—54, Sources of metals and stones—55, Beads and Jewellery—57, Miscellaneous objects—60, Religion—62, Epigraphic evidence—66, Central Asian sites—68, Conclusion—70.
- Chapter IV :** *The Period of the Neolithic and Non-Harappan Chalcolithic Cultures* : 71-104.  
General—71, Neolithic cultures—72, Eastern Group—72, North-Eastern districts—72, Orissa—75, West Bengal—75, Bihar—76, Southern group—76, Northern group—79, Kashmir Valley—79, Baluchistan and Punjab—80, Sub-Himalayan region—80, Ochre Coloured Pottery and Copper Hoard Culture—81, Ahar Culture—82, Malwa Culture—83, Jorwe Culture—87, Painted Grey Ware Culture—91, Swat Valley Graves—93, Jhukar Culture—94, Jhangar Culture—102, Cemetery 'H' Culture—102, Conclusion—104.
- Chapter V :** *The Period of Indian Megaliths* : 105-115.  
General—105, Previous work—105, Sites—106-107, Chronology—107, Typology—108, Distribution of Megaliths—108, Indian Megaliths and West Asia—108, Foreign strains in Indian Mega-

lithic-Complex—111, Indian Megaliths and Arabia—112, Conclusion—114-115.

**Chapter VI :** *The Period of the Vedas : 116-137.*

General—116, Original Home of the Aryans—117, Antiquity of the *Rigveda*—117, Geographical knowledge of the Vedic people, Vedic knowledge of seas and ships—119, Vedic knowledge of peoples living beyond the Indian frontiers—119, Persians' knowledge of India—121, Philological Similarity: linguistic similarity between the Vedic and the Avestan literatures—121, Linguistic similarity between Sanskrit and other languages of the Indo-European group—122, Religious beliefs and legends: Similarity in Religious beliefs amongst the Vedic and other Indo-European people—123, Similarity between the Vedic and Avestan gods—124, Similarity in the Vedic and Avestan legends—129, Foreign words in Vedic Literature—130, Similarity between the Vedic and Babylonian Mythologies—131, Evidence of commercial contacts between India and other countries—133, Archaeological Evidence—133, Anthropological evidence—135, Conclusion—136-137.

**Chapter VII :** *The Period of the Epics : 138-162.*

General—138, The *Rāmā�ana*—139, Identification of Sri Lanka' Different views—140, Suvarṇadīpas—141, Kośakaras—142, Kṣirodsāgara—142, Jalodsāgara—142, Devasakhā—144, Krauñca mt.—144, Śailoda—144, Bhadrāśvavarsa—145, Lohitsāgara—146, Tribal peoples and the Yavanas—147, Kaikeyi—147, Discussions and Conclusions—147-149, The *Mahābhārata* General—149, Dardas—151, Kambojas—151, Lohas—152, Rśikas and Paramarśikas—153, Yavanas—153, Kirātas—154, Śakas—154, Harahura—155, Ramatha—155, Tokharas and Kankas—156, Cinas—156, Huṇas—157, Romā—157, Citraka—157, Lohajanghas—158, Pāradas—158, Kitava—158, Dvyakṣas—158, Haimavatas—159, Śailoda—159, Some tribal Peoples—159, Śakadipa—160, Some dvīpas—161, Conclusion—161-162.

**Chapter VIII :** *The Period of the Early Historical Culture : 163-185.*

General—163, Egypt—165, Judaea—166, Assyria—167, Iran—168, Babylonia—172, Sri Lanka—174, Greece—179, Conclusion—185.

**Chapter IX :** *The Period of the Mauryan Culture : 186-278*

General—186, Egypt—188, Iran—191, Hellenistic world—202, Sri Lanka—207, Central Asia—210, China—214, Conclusion—217-218.

Epilogue—219-225.

Bibliography.

Index.

## ABBREVIATIONS

ABIA	Annual Bibliography of Indian Archaeology
ABORI	Annals of Bhandarkar Oriental Research Institute
AI	Ancient India
Ait. Bra.	Aitereya Brähmaṇa
AP	Ancient Pakistan
APAMNH	Anthropology Papers of American Museum of Natural History
APGAS	Andhra Pradesh Government Archaeological Series
ASIAR	Archaeological Survey of India, Annual Report
ASIAR EC	Archaeological Survey of India, Annual Report, Eastern Circle
ASIIIS	Archaeological Survey of India, Imperial Series
BDCRI	Bulletin of the Deccan College Research Institute
BIA	British Institute of Archaeology
BMFEA	Bulletin of the Museum of Far Eastern Antiquities
BSOAS	Bulletin of the School of Oriental and African Studies
Camb. Anct. Hist.	Cambridge Ancient History
CHI	Cultural Heritage of India
CII	Corpus Inscriptions Indicarum
Ep. Ind.	Epigraphia Indica
IAR	Indian Archaeology—A Review
I. Ant.	Indian Antiquary
IC	Indian Culture
ICWTC	India's Contribution to World Thought and Culture
IHQ	Indian Historical Quarterly
ILN	Illustrated London News
Ind. Stud.	Indian Studies
JAOS	Journal of the American Oriental Society
JASB	Journal of Asiatic Society Bengal
JBBRAS	Journal of Bombay Branch, Royal Asiatic Society
JBORS	Journal of Bihar and Orissa Research Society
JBRS	Journal of Bihar Research Society
Journ. Eg. Arch.	Journal of Egyptian Archaeology
JIAI	Journal of the Indian Archaeological Institute

JIH	Journal of Indian History
JNES	Journal of Near Eastern Studies
JNSI	Journal of Numismatic Society of India
JOGIS	Journal of Greater India Society
JOI	Journal of Oriental Institute
JRAS	Journal of Royal Asiatic Society of Great Britain and Ireland
JRASB	Journal of Royal Asiatic Society Bengal
JRAS (CB)	Journal of Royal Asiatic Society (Ceylon Branch)
JRASB (Letters)	Journal of Royal Asiatic Society Bengal (Letters)
Jour. Roy. Anth. Inst.	Journal of Royal Anthropological Institute
J. Sind. Hist. Soc.	Journal of Sind Historical Society
JUG	Journal of the University of Gauhati
JUPHS	Journal of U.P. Historical Society
JWAS	Journal of the Washington Academy of Sciences
KSK	Kishkindhākānda (of the Rāmāyaṇa)
MASI	Memoirs of Archaeological Survey of India
MBH	Mahābhārata
MBV	Mahābodhivāṃsa
MHV	Mahāvāṃsa
Mod. Review	Modern Review
MT	Mahāvāṃsa Tīkā
NH	Natural History
NIA	New Indian Antiquary
OHRJ	Orissa Historical Research Journal
PAPS	Proceedings of the American Philosophical Society (Philadelphia)
Proc. Brit. Acad	Proceedings of British Academy
PIHC	Proceedings of Indian History Congress
PPS	Proceedings of the Prehistoric Society (Cambridge)
RE	Rock Edict (Aśokan)
SIS	Sino Indian Studies
SPPMI	Seminar Paper on Problem of Megaliths in India published by the Banaras Hindu University
VIJ	Visheshiwarananda Indological Journal
ZDMC	Zeitschrift der Deutschen Morgenlandischen Gesellschaft.

## LIST OF ILLUSTRATIONS

### PLATES

#### Plate I.

- (a) Pottery from Shahr-i-Sokhta. After Biscione, "Dynamics of an early south Asian Urbanization : First Period of Shahr-i-Sokhta and its connections with Southern Turkmenia", *South Asian Archaeology*, 1973.
- (b) Fragment of Steatite Vases from Tepe Yahya Pd. IVB.—after Lamberg-Karlovsky and Tosi, "Shahr-i-Sokhta and Tepe Yahya : Tracks on the Earliest History of the Iranian Plateau", *East and West*, Vol. 23, Nos. 1-2, 1973.
- (c) Terracotta figurines, Zhob, After Gordon, *Prehistoric Background of Indian Culture*, 1958.

#### Plate II.

- (a) Kulli Type Pottery from Bahrain sites. After Thorvildsen, "Burial Cairns on Umm-an-Nar", *Kuml*, 1962.
- (b) Kulli type Pottery from Bahrain sites. After Thorvildsen, *Ibid.*

#### Plate III.

- (a) Steatite incised vessels, beads and incised Grey Ware from Tepe Yahya Pd. IVB. After Lamberg-Karlovsky and Tosi, *op. cit.*
- (b) Combed and Perforated Ware from Tepe Yahya, Pd. IVB, After Lamberg-Karlovsky and Tosi, *op. cit.*

#### Plate IV.

- (a) Terracotta figurines from Namazga Tepe. After Masson and Sarianidi, *Central Asia : Turkmenia before the Achaemenids*, 1972.
- (b) Terracotta figurines from Gumla. After Dani, "Excavations in the Gomal Valley", *AP*, Vol. V, 1970-71.
- (c) Terracotta figurines from Jalilpur. After Mughal, "New Evidence of the Early Harappan Culture from Jalilpur, Pakistan", *Archaeology*, Vol. 27, No. 2, 1974.

#### Plate V.

- (a) Terracotta Cart from Mohenjo-daro. After Allchin, *Birth of Indian Civilization*, 1968.
- (b) Steatite Seal from Mohenjo-daro depicting a ship. After Allchin, *Ibid.*
- (c) Terracotta amulet from Mohenjo-daro showing a ship. After Allchin, *Ibid.*
- (d) Terracotta boat from Lothal (mast and boatman reconstructed; Courtesy, Archaeological Survey of India).

**Plate VI.**

Dockyard of Lothal. Courtesy, Archaeological Survey of India.

**Plate VII.**

- (a) Painted Jar from Mohenjo-daro showing Kidney shape and intersecting circle pattern. Courtesy, Archaeological Survey of India.
- (b) Mother goddess from Mohenjo-daro. Courtesy, Archaeological Survey of India.

**Plate VIII.**

- (a) Terracotta head with square-cut beard from Lothal. Courtesy, Archaeological Survey of India.
- (b) Terracotta mummy from Lothal. Courtesy, Archaeological Survey of India.

**Plate IX.**

- (a) Steatite Seals from Mesopotamia. After Gadd, "Seals of Ancient Style found at Ur", *Proceedings of the British Academy*, Vol. XVIII, 1932.
- (b) Steatite Seals from Mesopotamia. After Gadd, *Ibid.*

**Plate X.**

- (a) Persian Gulf Seal from Lothal. Courtesy, Archaeological Survey of India.
- (b) Pot-sherds with impression of a Harappan Seal from Tepe Yahya. After Lamberg-Karlovsky & Tosi, *op. cit.*
- (c) Axe-adze from Mohenjo-daro. After Fairservis. *The Roots of Ancient India*, 1971.

**Plate XI.**

- (a) Seals from Barabar, Persian Gulf. After Peder, "on the Date of the Temple at Barabar in Bahrain", *KumI*, 1971.
- (b) Seals from Bahrain Island. After Bibby, "The Ancient Indian Styles Seals from Bahrain", *Antiquity*, Vol. 32, 1958.
- (c) Seals from Bahrain Island. After Bibby, *Ibid.*

**Plate XII.**

- (a) Seals from Mesopotamia. After Gadd, *op. cit.*
- (b) Bull figurine and Swastika on a pot-sherd from Altin Depe. After Gupta, S.P., "Prehistoric Indian Cultures in Soviet Central Asia", *ICWTC*, 1970.

**Plate XIII.**

- (a) Cylindrical Seal from Mohenjo-daro.
- (b) Impression of the Gilgamesh Seal from Mesopotamia. After Rowley, *Atlas of Mesopotamia*, 1962.

**Plate XIV.**

Cultural equipment of Tell Asmar and Harappan sites. After Frankfort, "The Indus Civilization and the Near East", *ABIA*, 1932.

### Plate XV.

- (a) Neoliths from Soviet Central Asia. Courtesy, V. Ranov, Dushambe.
- (b) Neoliths from Chinese Central Asia. Courtesy, National Museum, New Delhi.
- (c) Neoliths from Kashmir Valley. Courtesy, Archaeological Survey of India.

### Plate XVI.

- (a) Neoliths from Sarai Khola. After Khan, "Excavations at Sarai Khola", *Pakistan Archaeology*, No. V, 1965.
- (b) Neoliths from Ror, Punjab. Courtesy, Archaeological Survey of India.

### Plate XVII

- (a) Crested Ridge Blades from Neolithic sites in south India. Courtesy, Archaeological Survey of India.
- (b) Burnished Grey Ware from Shah Tepe. Courtesy, National Museum, New Delhi.
- (c) Mother Goddess with bull from Inamgaon. Courtesy, Deccan College, Poona.

### Plate XVIII.

- (a) Head-rest of ivory from Egypt. After Treasures of Tutan-Khamen.
- (b) Channel-spouted bowl from Navdatoli. Courtesy, Deccan College, Poona.
- (c) Channel spouted bowls from Iran. After Sankalia "New Light on the Indo-Iranian or Western Asiatic Relations between 1700 B.C.—1200 B.C.", *Artibus Asiae*, Vol. XXVI, 1963.

### Plate XIX.

- (a) Punctured pot with white filling from Navdatoli and Crete. After Sankalia, *op. cit.*
- (b) Three-legged pot from Chandoli and Giyan. After Sankalia *op. cit.*
- (c) Theriomorphic pot from Chandoli. After Sankalia, *op. cit.*
- (d) Theriomorphic pot from Sialk. After Sankalia, *op. cit.*

### Plate XX.

- (a) Spouted Vessels from Jorwe. After Sankalia, *op. cit.*
- (b) Cylinder Seal from Maski. After Thapar "Maski 1954 : A Chalcolithic site of the Southern Deccan", *AI*, No. 13, 1957.

### Plate XXI.

- (a) Persian coins. After Rapson, *Indian Coins* 1897.
- (b) Greek Coins. After *Archaeological Survey of India, Annual Report*, 1924-25.

### Plate XXII.

- (a) Stone Head, Sarnath. Courtesy, National Museum, New Delhi.
- (b) Stone Head, Sarnath. Courtesy, National Museum, New Delhi.

### Plate XXIII.

- Decorative motifs on Aśokan pillars, vis-a-vis Decorative motifs from extra-Indian contexts. Courtesy, Miss Margaret Hall and John Irwin. "Asokan

Pillars : A Re-assessment of the Evidence-III, capitals", *Burlington Magazine*, vol. CXVII, Number 871, Oct. 1975.

#### Plate XXIV.

- (a) Capital, Sarnath. Courtesy, Archaeological Survey of India.
- (b) Lion from Al'Ubaid. After Hall, H.R. and Woolley, C.L., *Ur Excavations*. Vol. I, *Al Ubaid*, 1927.
- (c) Persepolitan Capital. Courtesy, Miss Margaret Hall and John Irwin, *op. cit.*

#### FIGURES

- Fig. 1. Map showing possible cultural contacts during the Old Stone Age. After Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974.
- Fig. 2. Chopper-chopping tools from Soan Valley. After Krishnaswami, "Progress in Prehistory", *AI*, No. 9, 1953.
- Fig. 3. Hand-axes and other tools of Madras industry from Indian sites (near Madras). After Krishnaswami, *Ibid.*
- Fig. 4. Old Stone Age Tools from African sites (1 to 6) and from South-East Asian sites (7 to 11). After Leakey and Movius, respectively. Different publications.
- Fig. 5A. Middle Stone Age Tools (scrapers) from Indian sites. After Sankalia, "The Middle Palaeolithic Cultures of India, Central and Western Asia and Europe", *Central Asia*", 1970.
- Fig. 5B. Flake tools from Sanghao caves, Pakistan.
- Fig. 6. Middle Stone Age tools from Central Asia (No. 1, 2, 3, 5, 7, 8, 10, 11) and India (rest). After Gupta, "India and Central Asia in the Old Stone Age," *Central Asia*, 1970.
- Fig. 7A. Upper Palaeolithic Tools from Renigunta. After Murthy in Sankalia's *Prehistory and Protohistory of India and Pakistan*, 1974.
- Fig. 7B. Middle Stone Age tools from Hazar Sum, Afghanistan.
- Fig. 8. Microlithic Tools from Indian sites (near Bombay) After Krishnaswami, *AI*, No. 9, 1953.
- Fig. 9. Mesolithic assemblage of Natufian Culture of Palestine and of Iraq, Karim Shahir. After Mellaart "The Beginning of Village and Urban life", *The Dawn of Civilization*, 1961.
- Fig. 10. Map showing—Pre-Harappan settlements of the Indus System and Baluchistan. After Mughal, reproduced by Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974.
- Fig. 11. Chart showing chronological brackets of Baluchi cultures. After Mughal, *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan*, 1970.

- Fig. 12. Map showing sites of important Baluchi cultures. After Gordon, *Pre-historic Background of Indian Culture*, 1958.
- Fig. 13. Typological similarities of Painted Pottery designs found in Northern Iran (Chashmeh Ali Culture) and in Baluchistan (Togau). After Fairservis, *Roots of Ancient India*, 1971.
- Fig. 14. Typological similarities of painted pottery found in northern Iran (Early Hissar culture) and in northern Baluchistan (Quetta-Zhob-Loralai).
- Fig. 15. Painted Pottery from Quetta region : 1. Diagonal Stepped motif. 2. Thick and thin chevron motif, 3. Vertically-hatched chevron motif. 4. Thin chevronny or zig-zag line motif. 5. Opposed triangles pattern. 6. Thin-line step pattern. 7. Diagonally divided squares. 8. Degenerate thin-line step. 9. Fragment of a perforated foot-stand. 10. Alabaster cup. 11. Shallow bowl. 12. Stemmed goblets. After Piggott, "A new Prehistoric Ceramic from Baluchistan", *AJ*, No. 3, 1946.
- Fig. 16. 1. Loop with suspended lines from Amri  
 2. Loop with suspended lines from Samarra  
 3. Loop with suspended lines from Tell Halaf  
 4. Loop with suspended lines from Indus Valley  
 5. Checker board design from Amri  
 6. Checker board design from Ur  
 7. Step motif (Amri) from Dam Bhuti  
 8. Step motif (Amri) from Pandi Wahi  
 9. Step motif from Susa I  
 10-11. Opposed triangles motif, Jamdat Nasr Pd.  
 12-14. Opposed triangles, Crete, Early Minoan Pd. III  
 15. Opposed triangles, Honan, China  
 16-17. Tree motif, Quetta  
 18-19. Tree motif, Jamdat Nasr  
 20. Figurines, Kulli  
 21. Animal frieze, Sialk III  
 22. Animal frieze, Ninevite V Pottery
- After Starr, *Indus Valley Painted Pottery*, 1941. Casal, *Fouilles d' Amri*, 1964. Perkins, *Comparative Archaeology of Early Mesopotamia*. Hutchinson, *Prehistoric Crete*. Herzfeld, *Iran in the Ancient East*, 1941. Fairservis, *Excavations in the Quetta Valley, West Pakistan*, 1936. Piggott, *Prehistoric India*, 1950. Ghoshman, *Iran*, 1961.
- Fig. 17. Painted Pottery from Gumla II. After Dani, "Excavations in the Gomal Valley", *AP*, Vol. V, 1970-71.
- Fig. 18. Painted pottery from Gumla III. After Dani, *Ibid.*

- Fig. 19. The Buccranian (bull or wild-sheep horn) motif Nos. 1-3, 5-9, Iran and West Asia, No. 4. Kot Diji, After Sankalia, *Prehistory and Protohistory in India and Pakistan*, 1974.
- Fig. 20. Different designs and shapes of pottery from Kot Diji (2A) and Amri (2B). After Fairservis, *Roots of Ancient India*, 1971.
- Fig. 21. Pre-Harappan Painted Designs on pots from Kalibangan. After Thaper, *Indian Archaeology, A Review* 1962-63.
- Fig. 22. Bowls painted with cattle and black buck Rana Ghundai, Phase II. After Piggott, *op. cit.*
- Fig. 23. Typological similarities of painted pottery, design and seal found in northern Iran (Middle Hissar Culture) and in northern Baluchistan (Quetta, Zhob-Loralai). The Iranian material is generally from Sialk III (4-6) and Hissar IB and IC. After Fairservis, *op. cit.*
- Fig. 24. Painted pottery from Nal. After Fairservis, *Ibid.*
- Fig. 25. Animal-in-landscape motifs on Kulli Ware. After Piggott, *op. cit.*
- Fig. 26. Animal-in-landscape motifs on Early Dynastic Scarlet Ware from Susa and the Diyala Region. After Piggott, *op. cit.*
- Fig. 27. Comparative typology of Pottery and other artifacts of Bakun A, South-western Iran and Bampur Makran, South-eastern Iran. The Bampur-Makran material (right) is largely of the Khurab phase with some Kulli elements. The female figure with extended legs is of Damb Sadaat II affiliation. After Fairservis, *op. cit.*
- Fig. 28. Carved stone vases from Pakistan, Baluchistan and West Asia. After Durrani, "Stone Vases as evidence of connection between Mesopotamia and the Indus Valley", *AP*, Vol. I, 1964.
- Fig. 29. Carved stone vases from Mohenjo-daro and Khafajah. After Mode, *op. cit.*
- Fig. 30. Map showing principal sites of the Harappa Civilization.
- Fig. 31. Pottery designs and Seals—comb pattern. 1. Tell-Halaf, 2. Tepe Gawra, 3. Sialk, 4. Harappa, 5. Mohenjo-daro. Fish-scale pattern, 6. Mohenjo-daro 7. Tell-Halaf. File design, 8. Mohenjo-daro, 9. Chanhudaro, 10. Nal 11. Susa I, 12-13. Persepolis, 14. Swastika on a seal Mohenjo-daro, 15. Swastika of a different variety on a seal, Harappa, 16. Square on a seal, Mohenjo-daro, 17. Circles on seal, Harappa, 18. Cross on a seal, Harappa, 19. Button Seal, Tepe Hissar, 20. Button Seal, North Syria, 21. Button Seal, Chagar Bazar, 22-24. Plants or trees equivalent to the 'tree of life', Cemetery 'H' Harappa, 25-26. Painted Jar, Tepe Giyan.  
After Herzfeld, *op. cit.*, Ghrishman, *op. cit.*, Starr, *op. cit.*, Marshall, *Op. cit.*, Khan, Fresh side lights on the Indus Valley and the Bronze Age Orient., Perkins, *op. cit.*

- Fig. 32. Harappan motif and animal Toys. 1. Trefoil pattern, 2. Tree pattern  
 3. Short horned bull, 4. Rams, 5. Goat, 6. Reclining figure with Model  
 bed, 7. Stone head, Dabar kot, After Mackay, *op. cit*; Marshall  
*op. cit.*
- Fig. 33. Mother Goddesses—A. Egypt B. Sumer C. Crete D. Tell Halaf E. Quetta.  
 F. Tepe Hissar G. Tepe Gawra. After Mode *op. cit.*
- Fig. 34. A decorated cylindrical vase from Khafajah showing Indian motifs. After  
 Durrani, *op. cit.*
- Fig. 35. Etched Carnelian beads from Mesopotamia and the Indus Valley. After  
 During Caspers, "Etched Cornelian Beads", *BIA*, No. 10, 1971.
- Fig. 36. Different kinds of beads from Indus sites. After Wheeler, *Indus Civiliza-*  
*tion*, 1953.
- Fig. 37. A. Scene of Bull-fighting, Harappa, B. Scene of bull fighting, Crete,  
 C. Seal, Mohenjo-daro, D. Dance Scene, Harappa, E. Dance Scenes  
 Iran, F. Dance Scene, Crete. After Mode, *op. cit.*
- Fig. 38. Scenes of Hunting. A. Mohenjo-daro, B. Susa, C. Crete. After  
 Mode, *Ibid.*
- Fig. 39. A. Tiger Hero, Egypt, B. Tiger Hero—Crete, After Mode, *Ibid.*
- Fig. 40. The Material equipment of the Harappa Culture as found in India  
 and Russian Central Asia. 1-8 Pottery, 9-10. Copper-Bronze objects 20.  
 Fluted Core, 21-22-38, Ivory objects, 23-27, 32-33, Beads 28-31-34, Terra-  
 cotta objects, 35-37. Seals. Courtesy, Gupta, S.P., "Prehistoric Indian  
 Cultures in Soviet Central Asia", *ICWTC*, 1970.
- Fig. 41. Map showing settlements and routes connecting the Indus Valley with  
 Iran and Mesopotamia. After Lamberg-Karlovsky, *op. cit.*
- Fig. 42. Map showing Central Asian Sites and their probable contacts with the  
 Indus Sites. After Gupta, *op. cit.*
- Fig. 43. Chart showing Archaeological Correlations. After Dales, "Archaeological  
 and Radio-Carbon Chronologies for protohistoric South Asia", *South  
 Asian Archaeology*, 1973.
- Fig. 44. Neolithic pattern of India.
- Fig. 45. Neoliths from Assam. After Krishnaswami, "The Neolithic Pattern of  
 India", *AI*, No. 16, 1962.
- Fig. 46. Neoliths of the Eastern variety. Distribution of stone shouldered-hoes.  
 After Wheeler, *Early India and Pakistan*, 1959.
- Fig. 47. Neoliths from Bengal, Bihar and Orissa. After Krishnaswami, *op. cit.*
- Fig. 48. Neoliths from South-East Asia. After Krishnaswami, *op. cit.*
- Fig. 49. Multiple-Pot Burial, Nevasa. After Sankalia, *Prehistory and Protohistory  
 of India and Pakistan*, 1974.

- Fig. 50. Head-rests from Hallur. After Nagaraj Rao, in Sankalia, *Ibid.*
- Fig. 51. Bronze objects supposed to have been associated with Indian Copper Hoards. 1. Sword from Fort Munro. 2. Shaft-hole axe from Shahi Tump 3. Trunion celt from Shalozan. 4. Shaft-holed adze-axe from Mohenjodaro. After Lal, B.B., "Further Copper Hoards from the Gangetic Basin and a Review of the Problem", *AI*, No. 7, 1951.
- Fig. 52. A socketed celt from Kurukshetra. After Gordon, *op. cit.*
- Fig. 53. Objects of Banas Culture found at Ahar. After Sankalia and others, *Excavations at Ahar*, 1969.
- Fig. 54. Terracotta spindle-whorls from Ahar and Troy and Turkestan. After Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B.C. 1200 B.C.", *Artibus Asiae*, Vol. 26, 1963.
- Fig. 55. Map showing the sites of chalcolithic cultures of India. After Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974.
- Fig. 56. Map showing Chalcolithic Pattern of India.
- Fig. 57. Stemmed bowls from Navdatoli. After Sankalia, *op. cit.*
- Fig. 58. Painted Chalice from Tepe Hissar. After Ghrishman, *Iran*.
- Fig. 59. Painting of wavy lines on the base of the footed cups or goblets 1-10, Navdatoli and, Amri 11-19 Iran. After Sankalia, *op. cit.*
- Fig. 60. Elongated animals forms and designs on pottery, 1-4, Iran, 5-7 India. After Sankalia, *op. cit.*
- Fig. 61. Painted Human figures on chalcolithic potteries from India and West Asia,—1-2. Nagda, 3-9. Navdatoli, 10. Turkey, 11-13. Sialk 14. Tell Halaf, 15. Rana Ghundai, 16. Cheshmeh Ali near Tehran. Courtesy, Archaeological Survey of India, and H.D. Sankalia.
- Fig. 62. Pottery from Gandhara Grave Culture (8 from Navdatoli shown for comparison). After Dani, "Timargarha and Gandhara Grave Culture", *AP*, Vol. III, 1967.
- Fig. 63. Dish with looped-feet from Prakash, After Thapar, "Prakash 1955 : A Chalcolithic Site in the Tapti Valley", *AI*, No. 20-21, 1964-65.
- Fig. 64. Mother goddess from Hissar 1-3 and Nevasa 4. After Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974.
- Fig. 65. Chart showing the Painted Grey Ware shapes and some C-14 dates. After Thapar, "The Aryans : A Reappraisal of the Problems", *ICWTC*, 1970.
- Fig. 66. Map showing the Ancient Orient and principal protohistoric sites. After Thapar, *Ibid.*
- Fig. 67. Pottency designs & other objects. 1. Red Band, 2. Species Goat, 3. Crescent shaped pattern 4. Chequered pattern, 5. Triangles with concave sides. 6. Chevron motif, 7. Ball and stem motifs 8-9. Copper pins, 10. Zig-zag pattern, 11. Criss cross band, 12. Spouted Vessel, 13. Cup,

- Fig. 68. 14. Figures of '8' motif. After Mackay, *Chanhudaro Excavations*.  
 Painted panels of Mythological Scene depicted on Burial jars from 'Cemetery H' After Gupta, S.P., *Disposal of the Dead and Physical Types in India*, 1972.
- Fig. 69. Ceramic Industries of the 2nd millennium B.C. in North Mesopotamia. After Thapar, *op. cit.*
- Fig. 70. Cultural Equipment of Indian Megaliths 1-9. Iron objects 11. Shell objects Rest, pottery, 14, 18, 19. Different types of sarcophagi, 21. Urn Burial. After Gupta, *ICWTC*, 1970.
- Fig. 71. Some Megalithic Types in India. After IAR. 1956-57.
- Fig. 72. Groups of Megalithic and Allied Monuments in Asia and Africa. After Gupta, *op. cit.*
- Fig. 73. Ancient India showing local and tribal names in Vedic literature. After Majumdar R.C. *The Vedic Age*, 1960.
- Fig. 74A. India in the Rāmāyaṇa Age. After Vyas, S.N. *India in the Ramayana Age*, 1967.
- Fig. 74B. Position of original Laṅkā as suggested by Dr. Sankalia. After Sankalia, *Ramayana Myth or Reality*, 1973.
- Fig. 75. Northern India of the Mahābhārat Period.
- Fig. 76. Map showing satrapies of the Achaemenian Empire in the time of the Darius. After Ghirshman, *op. cit.*
- Fig. 77. Map showing the route of Alexander's invasion.
- Fig. 78. Lauriyanandangarh Capital. After Ray, *Maurya and Sunga Art*, 1945.
- Fig. 79. Gold Rhyton, Hamadan. After Ghirshman, *Persia from the origins to Alexander*.
- Fig. 80. Achaemenid campaniform base. After Pope (ed) *A Survey of Persian Art*, 1938.
- Fig. 81. Sarnath Lion capital. After V.S. Agarwal, *Chakra dvaja*, 1964.
- Fig. 82. A capital from Pataliputra. After Waddell, *Report on Excavation at Pataliputra*, 1903.
- Fig. 83. Columns Types, Persepolis, Apadān. After Herzfeld, *op. cit.*
- Fig. 84. Griffin (Pataliputra). After Piggott, "Throne fragments from Pataliputra", *AI*, No. 4, 1947-48.
- Fig. 85. Persian Bronze Leg. After Piggott, *Ibid.*
- Fig. 86. Detail of a capital in bas-relief Taq-i-Bustan. After Ghirshman, *Iran*, 1961.

## INTRODUCTION

From time immemorial, in spite of her comparative isolation created by mountains and seas, India has maintained close cultural, commercial and diplomatic contacts with several other countries of the world. There has been many ups and downs in the progressive development of these contacts but they never ceased to exist completely. Political fortunes of India has always been fluctuating, and they did affect the form, course and the direction of her relations with other countries, but political upheavals of one kind or the other could not completely stop the process. In fact, cultural ties between India and her neighbours have been so deep-rooted that they have survived in one form or the other, in spite of adverse political conditions, till this day.

The present work is the outcome of the awareness on our part that although there are several types of evidence establishing the fact that India maintained close political, cultural, and economic contacts with several countries of the world from the earliest times, particularly with those located on or immediately beyond her north-western and southern frontiers, yet there is hardly any single volume in which they are threaded together to present a complete picture of the contacts which existed during the period starting from Palaeolithic to about 300 B.C. To the best of our knowledge, such a situation is the outcome of the fact that the period under review is both prehistoric and early historical, that is preliterate and partially literate periods of Indian history. It is common knowledge that the history of these two periods is dealt by different disciplines, archaeology and traditional history, requiring two different methodologies. Thus, while archaeologists excavate ancient sites and base their conclusions on the similarity of the individual items as well as the totality of the material cultures of two different peoples, historians deal primarily with the written records, traditional accounts and art objects. In recent years, the two disciplines have become so much specialized, and, therefore, got somewhat separated, that it has become a very hard task for a specialist of any of the two disciplines to coordinate the two types of evidence in an organic whole. The writings of some of the distinguished archaeologists clearly show that while they marshalled the archaeological facts of pottery, tools, weapons, etc., extremely well, they have not been able to deal adequately with literature, traditional accounts, art objects, etc. Similarly, the works of some of the leading historians clearly show

## 2 History & Archaeology of India's Contacts with other Countries

that they have also not been able to marshall the archaeological data. Obviously, we felt the need for a single volume in which the archaeological and literary sources, belonging to a period usually not dealt within history books, could be adequately tackled to reconstruct the past-as-it-was, as far as it concerns India's contacts with other countries.

The scope of the work is well defined : it deals with the periods of the Pre-Harappan Stone Age and Chalcolithic cultures, Harappa Culture, Non-Harappan Chalcolithic cultures, Vedic Culture, Early Historical Culture and Mauryan Culture. The periodization is absolutely traditional, well-known to the students of Indian history, although, there could be a number of alternatives, e.g., The Period of Stone Age cultures, the next three chapters could be clubed into one with the major heading 'The Period of the Chalcolithic Cultures of India' or the last three chapters could be put together into one, under the major heading 'The Period of the Early Historical Cultures', etc., but we did not think it proper to do so since periodization and chapterization have always been somewhat difficult exercises and argument and counter-arguments clearly show certain amount of subjectivity. In the ultimate analysis, however, they are only a rough-guide to break up the material into convenient parts and they serve the best so long they are in conformity with the usage. Since the major part of this work concerns the prehistoric and protohistoric periods of Indian History we have followed here the cultural labels used by prehistorians so that there is no difficulty in following the sequence of known cultures and their time-brackets.

The source-material for our study is varied. As already indicated, the span of the present work is very wide and covers both the prehistoric and early historical periods. For the prehistoric, including protohistoric periods, i.e., from the time of the emergence of a number of Old and New Stone Age cultures to the period of the Megalith Builders, our source-material is confined almost exclusively to archaeological discoveries contained in archaeological reports of excavations and explorations conducted during the last two centuries or more in India as well as in countries beyond her frontiers. For the Early Historical period, i.e., from the Vedic times to the end of the Mauryas, our source-material includes traditional and classical accounts, literary data, epigraphical records, numismatic finds, sculptural fragments and standing monuments.

It may, however, be added that it is not the first attempt to work-out the nature and details of India's cultural contacts with other countries : H.G. Rawlinson wrote *Intercourse between India and the Western World* in 1916. Even earlier than him, V. A. Smith had taken up in his *Early History of India* (1904) a similar theme. An equal excellent book has recently (1969) been written by D.P. Singhal, viz., *India and the World Civilization*. Another work of general but encyclopedic nature is *India and World*, (1964) by Buddha Prakash. In a slightly different category, but of the same nature, is *India's Contribution to World Thought and Culture*, published in 1970, a compilation of 70 articles contributed by some of the leading authorities

on the subject. Besides these, there is a large number of books and monographs, articles and reports on different individual aspects of the problem in hand. Thus Tarn's *Greeks in Bactria and India* is the best account on one aspect of the subject of our immediate concern. F.C. Davar's *India and Iran through the Ages* (1953) is, however, of a generalized kind of treatment of the subject it deals with. Gajjar's *Ancient Indian Art and the West* (1971) is a fairly good study based mainly on the archaeological data. *Studies in Ancient India and Central Asia* (1971) by Bongard-Levin is another significant recent publication on India's cultural relations with Soviet Central Asia. Similarly, P.C. Bagchi's *India and Central Asia* is a great work on India's relations with Chinese Central Asia. On India and China, there are a large number of books and articles but probably the most significant ones are—P.C. Bagchi's *India and China* (1950) and K.M. Panikkar's *India and China* (1957).

The list of the previous important works may be enlarged to any extent, the Bibliography contains all of them, but the fact remains that none of these works present the directional changes in India's cultural relations with other countries of the world between Palaeolithic and 300 B.C. in the combined perspective of archaeological and historical sciences.

It may, however, be clearly mentioned that here we are dealing with the period which may rightly be called the 'Formative Period' of India's cultural contacts with other countries. As usually is the case in such situations, the nature of our evidence is often fragmentary, sometimes extremely slender, still we have tried to piece together the past as much as we could. It may also be pointed out that in several cases our results are necessarily tentative, for example the suggestion based on the material contained in the two epics, since the exact identification of a large number of geographical names occurring in them is not always possible. Still we felt that they contain a mine of information which we have tried to analyse in Chapter VI to uncover the mystery of India's contacts with other countries as much as we could. The limitations of our source-material, especially that dealing with prehistoric period, are obvious. There are more guesses than certainties. Bone, stone, pottery and similar other material items do present some important clues for the purpose of reconstructing history but our inference may or may not always be correct. Working within these limitations of the source-material, we have tried to explore all the possibilities to reconstruct a reasonable picture that emerges from the study of the material in hand.

After the Stone Age, our study opens with the Pre-Harappan communities of India (throughout this work 'India' stands for India of the pre-partitioned period). By and large, they were confined to Baluchistan and southern Sind. Their antiquity goes back to 3500 B.C. or a little earlier (C-14 date of Kili-Ghul-Mohammad), may be 4000 B.C. or earlier if we use MASCA corrections and they continue to dominate the history of the country for about a thousand years; displaced

#### *4 History & Archaeology of India's Contacts with other Countries*

only by the Harappans. Archaeological studies have conclusively shown that these communities maintained close relations with contemporary Iran. In Chapter II we have tried to enlist the archaeological evidence, based mainly on pottery and stone objects to show the nature and extent of contacts with West Asia during the dawn of Indian Civilization.

Chapter III deals with the period of the Harappa Culture, or the Indus Valley Civilization as it is sometimes called. It is more than half a century when the classical sites of the Harappa Culture were first excavated. Volumes have been written not only on these sites but also on several cognate ones, and they all speak of significant commercial relations between India, Mesopotamia, Iran, Persian Gulf islands, Soviet Central Asia, Afghanistan and Baluchistan. The archaeological material is enormous and varied; including a large number of cuneiform inscriptions of 3rd millennium B.C. mentioning trade items imported in Mesopotamia from 'Meluhha', generally identified with Harappan India, sometimes specifically with Gujarat. The theories built on them are, however, often extremely diverse. We have, therefore, tried to select some of the most reliable pieces of evidence to reconstruct India's contacts with her western neighbours between 2500 B.C. and 1700 B.C., the present day accepted time-bracket (which takes into account C-14 dates and also the archaeological dates based on cross-referencing of material items) for the Harappa Culture.

The Harappa Culture was followed by the Non-Harappan Neolithic-Chalcolithic cultures of central and western India which present some of the most significant evidence in pottery, terracotta, beads, etc., to indicate important links between India and contemporary Iran. We have tried to analyse this material in the context of the material unearthed during the last two decades or more.

The Chalcolithic Cultures were followed by some of the Early Historical iron-using cultures of India, chiefly, the one represented by the megalithic monuments. The Indian megaliths are 'jungle of problem', in the words of Sir Mortimer Wheeler. They are really enigmatic; on the one hand they appear to be related with the Mediterranean megalithic burial monuments of the Neolithic and Copper-Bronze Age and, on the other, they are closely related to some of the burial practices of Chalcolithic cultures of India, and also with the present day tribal practices. They have been explored and excavated throughout India during the last 200 years, inspiring innumerable controversies regarding their chronology, diffusion and authorship. We have tried to analyse some of these controversies afresh to visualize their relationship with some of their West Asian counterparts. They are now dated by C-14 dates between 1000 B.C. and 100 A.D.

So much for the chapters dealing with the prehistoric and protohistoric cultures of India.

In the absence of the deciphered Harappan inscriptions and also any living

tradition the Formative Stage of Historical India may be taken as opening with the Vedic Age since the knowledge about the Early Aryans comes from literary sources as well as living tradition, although we have no contemporary written records. Who were the Aryans? From where did they come to India? Were they the foreign or the indigenous people? How and what type of contacts they maintained with Central and Western Asia? These are only very few of the large number of questions often asked in the context of the Vedic Aryans. As the questions are varied, so are the answers, sometimes absolutely opposing each other. We are not on sufficiently sure grounds, particularly archaeologically, to decide these questions either way. We have, however, tried to examine the linguistic data, as well as the archaeological and reconstruct the picture of the Vedic times as much as we could.

The Early Historical Period, however, extends from 600 B.C. to 400 B.C. This was also the period in which India witnessed the Persian invasions. For the first time parts of the mainland came directly under a well-organized political hegemony of a foreign dynasty, the Achaemenid rulers of Persia. The political contacts led to cultural exchanges, the evidence of which is fragmentary, although sure and certain. We have dealt with them to the extent the evidence allowed us to deal properly. It may be emphasized that Indo-Persian cultural and commercial contacts during this period appear to be limited and short-lived.

The turning point in India's contacts with the outside world occurs at the time of Alexander's conquest of West Asia and the Punjab plains, followed by the defeat of Seleucus at the hands of Chandragupta Maurya, and the founding of the Mauryan Empire embracing large tracts of lands between the Punjab and the eastern borders of Iran, conquered earlier by Alexander. This great political shake-up of the country was fortunately followed by a long, as also peaceful and stable, rule of Asoka the Great who established ambassadorial relationship, political and religious, with the contemporary Orient. How could he achieve such a great success, is a matter on which so much has been written that here we have only tried to review the entire situation and explore some of the forces which made it possible; whether it was in the field of religion and art or trade and commerce, the impact of the Mauryan rule was indeed decisive. The measures involved in this process created a strong base for erecting a big edifice of India's cultural contacts with other countries in the following period. The flowering of a new cultural pattern that emerged in this period provided a firm base for the succeeding periods, which will be dealt with, it is hoped, someone else in the near future. :

## CHAPTER I

# THE PERIOD OF STONE AGE CULTURES

Probably no other problem has been more ticklish with the Prehistorians than the explanation demanded of a very simple observation of the common visitors to a prehistory gallery in a museum : the tools of the Old Stone Age of Africa, Europe and India and parts of Western and Central Asia, *viz.*, chopper-chopping tools, handaxes and cleavers, levalloisean flakes, etc., look alike<sup>1</sup>. They argue that these areas are widely separated and in the Pleistocene period, to which these tools belong, did not have any means of fast communication to support the theory of 'ideas have wings'. Obviously, contact of some specific kind between one group of people and the other leading to their intermingling is the only rational explanation. The mechanism of this kind of contact works through the actual migration of people in time and space. In the process of migration of people, and therefore of their culture, two things are involved : firstly, colonization of an area where human beings did not live earlier ; and secondly, meeting other human groups with their own cultures. Obviously, the phenomenon of culture-diffusion in the Stone Age admitted both the features, colonization and culture-contact situation (Fig. 1).

When seen in the context of India, it becomes clear that both the phenomena might have existed side by side.

### Old Stone Age Cultures

Handaxe-cleaver complex of the Old Stone Age tools is the most prominent and wide-spread complex in India as well as Africa, and it has often been postulated that India, particularly peninsular India which was the real home of handaxes and cleavers, received this complex from eastern countries of Africa, where the tradition of this complex was of equal antiquity, may be even of slightly earlier date.

In India, handaxes have been found in Gujarat as also in central, eastern, western and southern regions along the banks of big and small rivers alike, as has been demonstrated by Sankalia recently<sup>2</sup>. In northern India also, these tools have

1. Krishnaswami, "Stone Age in India", *AJ* No. 3 (1947), pp. 40-42. Here the learned author shows typological parallelism in India and abroad.
2. Sankalia, *Prehistory and Protohistory of India and Pakistan*, pp. 52-142.

been reported from Chauntra and other places in the Potwar region by De Terra and Paterson<sup>1</sup>, Sankalia reports them from Pahalgam in the Kashmir valley also. Their dating has been a problem. Sankalia places the Pahalgam tools, made on very thick flakes, in the First Interglacial period (Early Pleistocene)<sup>2</sup>. De Terra and Paterson, however, placed their Pre-soan massive flake tools from the Boulder Conglomerate zone of the Potwar region in the Second Glacial period. If these claims have to be accepted (Oakley has not accepted the Pre-soan tools as tools)<sup>3</sup>, then the antiquity of Old Stone Age in India may go back to a date considerably earlier than 1/2 a million years from now, i.e., Middle Pleistocene period, the oft-quoted date for the early man in India. In any case, tools of the Early Soan<sup>4</sup> and Chelles-Acheul type have regularly been found in the north and south in the deposits of the Second Inter-Glacial period, going back to 500,000 years from now (Fig. 2 and 3).

The situation in Africa is best exemplified at Olduvai Gorge where stone implements, chopper-chopping tools, and the remains of *Homo Habilis* have been found in Bed I of the Early Pleistocene period<sup>5</sup>. It may, however, be made clear that as far as the beginning of the Handaxe Culture is concerned it's date also does not go much beyond 500,000 years from now, same as in India<sup>6</sup>. But there was a difference. In Africa, there is a clear evidence from Bed I and Bed II of the Olduvai Gorge that the earliest (Chelles) handaxes, placed at the beginning of Bed II, evolved out of pebble chopper-chopping tools, placed in Bed I dated to 1.75 million years from now<sup>7</sup>. In India there is absolutely no evidence of this kind. As a matter of fact, we do not have the evidence of even the earliest stage of handaxes (Chellean or Abbevillian type) occurring in a geological horizon which is definitely older than the horizon in which developed Acheulian handaxes are found, since doubts have been raised regarding the stratigraphic position of both the so-called Boulder Conglomerate Zone of the Narmada (De Terra and Paterson)<sup>8</sup> and also the Red Greasy Clay of the Narmada (Khatri)<sup>9</sup> which were claimed to have produced the Chellean handaxes<sup>10</sup>.

1. De Terra and Paterson, *Studies on the Ice Age in India and Associated Human Cultures*.
2. Sankalia, *op. cit.*, pp. 33-37. For dating, *Ibid* p. 35.
3. Oakley, "Tool Makyth Man", *Antiquity*, Vol. 31, 1957, pp. 199-209.
4. Lal, "Palaeoliths from the Beas and Banganga Valley, Punjab", *AI* No. 12 (1956), pp. 58-92. Also, D. Sen, "Nalagarh Palaeolithic Culture", *Man in India*, Vol. 35 (1955), pp. 177-84.
5. Leakey, Evernden and Curtis, "Age of Bed I, Olduvai Gorge, Tanganyka", *Nature*, Vol. 191, No. 4787, pp. 478-79.
6. Coles and Higgs, *The Archaeology of Early Man*.
7. Leakey, et al, *op. cit.*
8. De Terra and Paterson, *op. cit.*
9. Khatri, "An Oldowan Pebble Culture in India", *Asian Perspective*, Vol. 6, 1962, pp. 186-196.
10. Gupta, "Sohan Sutlej and Mahadevian—A Review of the Tools and Terms of the Indian chopper-chopping culture-assemblage", *JBR*, Vol. LV, 1969, pp. 18-20. Also, Sen and Ghosh, "Sequence of the Narmada Valley Central India Lithic Culture Complex in the Pleistocene", *Rivista Di Scienze Preistoriche*, Vol. XVIII, 1963, Fasc. 1-4, p. 12.

Scholars agree that Indian handaxe-complex seems to have started with the Acheulian stage, and to that extent may be much younger than their African counterpart, it may not be older than 200,000 to 250,000 years from now (Fig. 4).

Thus, although much work remains to be done to determine the exact chronology of the handaxe-complex in India, it appears that it is slightly later than the African (and also European) assemblages. If that is so, the possibility of the African handaxe-makers coming to India through Gujarat (so Sankalia<sup>1</sup> postulates) is considerable. In this connection, the opinion of geologists like Blandford and Medlicott may be quoted according to which Africa and Saurashtra were certainly connected with land bridges, at least in certain epochs of the Pliocene period when the sea-level was considerable lower than what it is at present<sup>2</sup>. But we have no means to ascertain if this was the situation during the Pleistocene period also. In that case, the migrants might have taken the land-route passing through Arabia and southern Iran, as Clark and Piggott have suggested<sup>3</sup>. But the evidence of handaxes and pebble choppers is practically nil in both the regions.

In conclusion, it may be said that there is some distant possibility that India, south of the Ganga in particular, was colonized by the handaxe using peoples of Africa, of the type whose mortal remains have been found at several places in Africa<sup>4</sup> but unfortunately not in India so far. It does not mean that earlier to them, men were not living in southern half of India but so far we have no clear cut evidence of those men, archaeological or anthropological.

It may not be out of place to mention that Africa has also been the original home of the handaxe using Europeans.

As already stated, handaxe-complex was preceded by chopper-chopping complex at Olduvai Gorge located in Tanzania. It has been found as a developing culture through different levels of Bed I, the lowest of the four Beds or geological strata. Tools comparable in form have been found at several sites in the sub-Himalayan region of India and Pakistan<sup>5</sup> and Central Asia<sup>6</sup> (Chart 1). Sometimes these tools are

1. Sankalia, *op. cit.*, pp. 139-141.
2. In *Bombay Gazetteer*, Kathiawar, p. 78.
3. Clark and Piggott *Prehistoric Societies*, p. 52.
4. Leakey and Goodall, *Unveiling Man's Origins*.
5. Sankalia, *op. cit.*, pp. 17-36.
6. Gupta, "India and Central Asia in the Old Stone Age", in *Central Asia* (Ed. A. Guha). Proceedings of the International Conference on Central Asia held at New Delhi, 1969, pp. 14-24. In Tadzhikistan there are three major stages of Stone Age cultures as worked out by V.A. Ranov in his "Pebble Tools and their Role in the Palaeolith of Central Asia", *Report and Information Archaeology USSR* (Moscow, 1966), p. 4 and in "On Relations between the Palaeolithic Cultures of Central Asia and some Oriental Countries", Paper read in the VII International Congress of Anthropological and Ethnological Sciences, Moscow, 1964. From earliest to the latest, they are Tokaly Stage, Kara Bura Stage and Karasu Stage. Gupta has correlated them respectively with Early Soan, Late Soan and Evolved Soan of De Terra and Paterson.

found mixed with handaxes, while at others they are found exclusively. Similar tools have also been found mixed with handaxes in different proportions at a large number of sites in the valleys of the Narmada, Godavari and Krishna, and their tributaries. In any case, their concentration is definitely in the sub-Himalayan region<sup>1</sup>. Now once again it is surmised that the Indian chopper-chopping complex has its ultimate origin in Africa, although we are not clear about the route adopted by the migrating people since the intervening land is more or less devoid of these tools in any appreciable number.

There is still another view. Movius clubbed the sub-Himalayan chopper-chopping complex with the Chinese and southeast Asian chopper-chopping complexes<sup>2</sup>. It may, however, be stated that this is too big a generalization to be accepted. A little detailed study of the Chou-kou-tien industries of China and the Patjitanian industries of Java and Tampanian industries of northern Malaya or even the Anyathian industries of Upper Burma, about which Movius has written in some details, will show only two things : firstly, that the handaxes were extremely rare, almost nil, in these complexes<sup>3</sup>, as they are at a number of sites in the sub-Himalayan region, and, secondly, that chopper-chopping tools had a good percentage in these complexes<sup>4</sup>. However, these complexes were marked by what Movius called 'hand-adze', a tool-type (square or rectangular chopper made on core) not available in the sub-Himalayan region, the difference in raw materials available in the two regions, in south-east Asia silicified tuff and fossil wood are found which are not found in the sub-Himalayan region, alone will not be able to explain this phenomenon since in the Anyathian Culture there are 'concave ended' and 'double ended' handadzes which could be produced on quartzite, the stone widely used in India, but these types were just not made. Then, Levalloisean technique, which was well-known to the sub-Himalayan people as their flake-tools show, was practically unknown to the Old Stone Age southeast Asia<sup>5</sup>. Obviously, more work is needed before we can visualize the situation as it really existed in this part of the world (Fig. 4).

### Middle Stone Age Cultures

From the Old Stone Age to the Middle Stone Age, there has been a very long journey, covering lakhs of years of time span; the Middle Stone Age in India seems to have started not earlier than 50,000 B.C. to 40,000 B.C.<sup>6</sup> By that time, Europe had already passed through its Middle Palaeolithic stage and entered into Upper

1. Gupta, Comments on the paper of Soundara Rajan in *Indian Prehistory*, 1964 (Poona, 1965), Eds. Misra and Mate, pp. 11-12. Lal, *op. cit.*
2. Movius, *Early Man and Pleistocene Stratigraphy in Southern and Eastern Asia*, Vol. 19, 1944.
3. Movius, *op. cit.*
4. Movius, *op. cit.*
5. *Ibid.*
6. Sankalia, *op. cit.*, p. 146. There are a few C-14 dates supporting this chronology, "Progress in Prehistory", *A.I.* No. 9, p. 64.

Palaeolithic period. It is, however, possible that in some of the West and Central Asian sites Middle Palaeolithic Cultures, particularly the Mousterian, the Asiatic Mousterian of a number of authors, lingered till the very end of the Pleistocene period. In that case, as Krishnaswami<sup>1</sup> and Sankalia<sup>2</sup> have tried to show, there is a possibility of this Asiatic Mousterian of Levalloisean tradition being related with the Indian Middle Stone Age assemblage of flake and flake-blade tools (Fig. 5). The contact, if any, between the two sets of people must have been maintained through north-western sites, such as the Sanghao Cave (Pakistan)<sup>3</sup> Hazar Sum (Afghanistan)<sup>4</sup> Kara Bura (Tadzhikistan)<sup>5</sup> and Tashik-Tash (Uzbekistan)<sup>6</sup>. In this connection, we must make at least two significant observations. Firstly, the tool typology two significant observations. Firstly, the tool typology of the Middle Stone Age assemblage of India is not identical with the tool typology of the Asiatic Mousterian sites mentioned above, only some points and scrapers on flakes show similarities. Secondly, the Asiatic Mousterian is associated with the Neanderthal man, whose remains have been found at sites like Tashik-Tash, but we have absolutely no idea about the physical type associated with the Middle Stone Age assemblages in India (Fig. 6).

### The Problem of Upper Palaeolithic

The change from the Middle Stone Age (or Middle Palaeolithic) to Late Stone Age (or the Mesolithic) in India passed through a short-lived stage, sometimes called 'Upper Palaeolithic'. Unfortunately, in India it is still not very well defined, at least stratigraphically<sup>7</sup>. Most of our inferences are based on tool typology. The

1. Krishnaswami, *op. cit.* He calls it Asiatic Aurignacian.
2. Sankalia, *op. cit.*, p. 205. For a detailed study of Middle Stone Age industries in India, see Vidula Jayaswal, *Puratattva*, No. 7 (1974) pp. 13-16
3. Dani, "Sanghao Cave Excavations" *AP*, Vol. 3, pp. 1-50.
4. Puglisi, "Preliminary Report on the Researches at Hazar Sum", *EW*, Vol. 14, Nos. 1-2, pp. 3-12.
5. Ranov, "On the Relations between the Palaeolithic Cultures of Central Asia and some oriental countries", VII *International Congress of Anthropological and Ethnological Science*, Moscow, 1964.
6. Movius, "Palaeolithic and Mesolithic Sites in Soviet Central Asia", *PAPS*, Vol. 97, pp. 384-421.
7. Sankalia, *op. cit.*, p. 207-230. Here he has compiled the results of all the important works done so far. Although he has in practically every case argued in favour of Late Pleistocene association of these assemblages, any one can see from the details given that geological studies of the associated strata are too superfluous to have any definite conclusions. It is significant to note that he has meticulously avoided section drawings of any of the sites mentioned by him.

The only ray of hope comes from the Belan and Son valleys but details of work both on tool-typology and stratigraphy has yet to be done by the explorers, G.R. Sharma, R.K. Verma, V.D. Misra and O. Mandal of the University of Allahabad. See the *Presidential Address by G.R. Sharma delivered to the III Annual Congress of the Prehistoric Society held at New Delhi, Jan. 1975* and printed in a revised form in the *Prof. K. C. Chattopadhyaya Commemoration Volume* published recently (1975) by the Deptt. of Ancient History, Culture and Archaeology, University of Allahabad.

tools found come mainly from open-air sites, such as Renigunta, Distt. Chittoor, Vemula, Distt. Cuddapah<sup>1</sup> and Yerragondapalam, District Prakasam<sup>2</sup>, all in Andhra Pradesh. The trial trenches on the river deposits at these sites do not establish their date in the Pleistocene at least on the basis of studies made so far. G.R. Sharma has, however, reported these tools from an 'upper gravel' of River Belan, in Distt. Mirzapur, but the geological dating of this gravel has also not been firmly established so far<sup>3</sup> although a lot of work has been done in this direction. M.L.K. Murty and others have reported even bone tools, scrapers points, chisels, etc., from a late Pleistocene deposit within a cave—Muchchatla Cintamani Gavi, near Bentamacherla, Distt. Kurnool, which are also included in the category of Upper Palaeolithic assemblage but according to one view the fauna associated with them is of post-pleistocene period<sup>4</sup>. Sali also collected a similar assemblage from an excavated trench at Patne, Distt. Jalgaon, Maharashtra<sup>5</sup>, but in terms of chronology we have not become more enlightened. At best we can say that a picture of Upper Palaeolithic is just emerging in India with tool types, such as backed blades, burins, points, scrapers, awls and pen-knives of stone, and scrapers, points, etc., of bone. That it is only remotely comparable with the Upper Palaeolithic of Europe is absolutely clear since none of the Indian assemblages so far published is similar to any of the well-known Upper Palaeolithic assemblage of France or Germany, viz., Aurignacian, Solutrian, and Magdalenian. We, therefore, do not visualize any significant culture-contact situation between India and the outside world during this period. But this observation must be qualified since our researches in this field have so far been extremely limited. There is one ray of hope when we ask a question like this : Why do we observe an almost identical pattern of changes in cultural assemblages of India and Europe during the Palaeolithic period ?... May be, we are able to discover better assemblages than those mentioned above, better from the point of view of the evidence of Indo-European contacts during the Upper Palaeolithic period. Hopefully, we should wait for the geological and paleontological studies of the horizons from where the so-called Upper Palaeolithic assemblages have been and are being reported. In this connection the most promising work is being done by the University of Allahabad in the valleys of the Belan and the Son, the latter area has yielded a large collection of the animal fossils of the Pleistocene period<sup>6</sup> (Fig. 7).

### Late Stone Age Cultures

The climatic changes which occurred world over after the Glacial Cycle of

1. Murty, "Blade and Burin Industries near Renigunta", *PPS* for 1968 and 1969, pp. 83-101.
2. Reddy, "Vemula Industry in Cuddapah Basin", *Indian Antiquary*, 1970, pp. 227-34.
3. Sharma, *op. cit.*
4. Sankalia, *op. cit.*, pp. 215-217.
5. Sankalia, *op. cit.*, pp. 226-227.
6. Sharma, *op. cit.*

the Pleistocene Period brought about tremendous changes in fauna and flora as well as in tool typology and hunting methods. The Holocene, as the present period is called, brings within its wake microlithic tool types, such as triangles, trapeze, lunates and rectangles. Nevertheless, several Upper Palaeolithic tool types continue, although in comparatively smaller sizes, such as the burins, backed blades, points and awls. In India this assemblage is wide-spread, particularly in peninsular region<sup>1</sup>, although it has been reported from within the Gangetic Valley at sites like Sarai Nahar Rai, Distt. Pratapgarh, Uttar Pradesh<sup>2</sup>, and West Bengal<sup>3</sup> has also yielded several sites of the same category (Fig. 8).

It has been observed at several places, that in the excavated trenches the tools of the non-geometric shapes occur in the lower levels (e.g., at Birbhanpur<sup>4</sup> in Bengal, and Lekhahia<sup>5</sup> in Uttar Pradesh) while the tools of the geometric shapes occur in the upper levels; in the top-most levels of Lekhahia handmade red pot-sherds have been found and from Langhanaj<sup>6</sup> handmade grey pot-sherd have come. At Sarai-Nahar Rai, bones were found, when dated by C-14 method, they yielded the date of 9000—8000 B.C. At Bagor and also Adamgarh the C-14 dates take back the antiquity of the Mesolithic phase in India to 5000 B.C. There are several other C-14 dates bringing down the chronology to as late as 1000 B.C. or even later. The general opinion is that the culture is datable to 5000—1000 B.C. bracket (See Appendix I for actual dates).

That the microlithic assemblages evolved directly from the Upper Palaeolithic in Europe, West Asia and India is clear on extensive typological studies, but how far they show diffusion in time and space to establish the theory of Indo-West Asian contacts (Europe was too far off) during this period is a question worth probing into since the mesolithic of India is by and large comparable to the Palestinian, Iranian and Central Asian mesolithic and possibility does exist that the microlithic assemblages in India came from West Asia through Afghanistan and North-West Pakistan (Fig. 9).

At Mt. Carmel, a number of cave-deposits have been excavated during the last hundred years<sup>7</sup>. They clearly show that from about 10,000 B.C. change from non-geometric to geometric microliths becomes pronounced, as we come down in the

1. Misra, "Twenty five Years of Indian Prehistory (1947-72), a Review of Research" in *Man and Society* (Ed. K. S. Mathur and S. Verma), Lucknow, 1973, pp. 1-54.
2. Sharma, "Mesolithic Lake Cultures in the Ganga Valley, India", *PPS*, Vol. 39, pp. 129-146.
3. Lal, "Birbhanpur : A Microlithic Site in the Damodar Valley, West Bengal", *AJ*, No. 14 (1958), pp. 4-48
4. Lal, *op. cit.*
5. Sharma, Comments on the "Mesolithic Phase in Prehistory of India", pp. 76-79 in *Indian Prehistory* : 1964 (Eds. Misra and Mate).
6. Sankalia, *Excavations at Langhanaj* : 1944-63, Part I, *Archaeology* (1965).
7. Garrod, "The Stone Age of Pakistan", *Antiquity*, VIII, 30, pp. 133-50.

time scale. However, by about 7000-5000 B.C. bracket neolithic assemblage appears not only in Jordan as is proved at Jericho<sup>1</sup>, but also in West Asia, as established at Jarmo in Iraq<sup>2</sup>, and Central Asia, as seen at Djeitun Depe in Turkmenia<sup>3</sup>. It is also significant to note that within all these early neolithic complexes (with handmade pottery) the microliths continue to be used on a large scale.

In India also exactly the same trend is discernable, although, chronologically speaking, we are not on very sure ground if the Indian and West Asian tool-complexes were contemporary; at least for the neolithic we are sure that Indian neolithic cultures started at least two to three thousand years later<sup>4</sup> in the fourth or third millennium B.C. It may, however, also be interpreted in terms of 'time taken in the diffusionary process'. In that case, we feel that although Indian microlithic assemblages appear to be slightly later, at best by a couple of thousand years, than the West Asian (including Central Asian) assemblages, still there is every possibility that they emerged in India under the direct or indirect impact of the West Asian traditions as was earlier postulated by Krishnaswami<sup>5</sup>. And to that extent it establishes the relationship between India and West Asia during the Mesolithic period. Nothing more can be said at the present state of research.

1. Kenyon, *Archaeology of the Holy Land*.

2. Braidwood and Howe, *Prehistoric Investigations in Iraqi Kurdistan*, Studies in Ancient Oriental Civilization No. 31.

3. Masson and Sarianidi, *Central Asia before the Achaemenids*.

4. However, recently, a C-14 date of 6000 B.C. has been reported by G.R. Sharma. It is obtained on samples coming from a neolithic site called Koldihwa, Distt. Allahabad, U.P., But so far it is the only site known of this antiquity.

5. Krishnaswami, *op. cit.*, p. 37.

## CHAPTER II

# THE PERIOD OF PRE-HARAPPAN VILLAGE CULTURES OF BALUCHISTAN AND SIND

One of the most distinctive features of protohistoric period, in contradistinction to the historical period, according to Prof. Sankalia, is that, by and large, India was at the receiving end<sup>1</sup>. It, of course, does not imply that the character of the protohistoric Indian culture had been cast in the moulds of cultures which originated outside India, but it does emphasize the implications of the geographical placement of India, peripheral in relation to other countries of the Orient, and the migration of different peoples and cultures into India during this period. Malik, on the other hand, emphasizes a different aspect : the capacity of the Indian culture to accommodate them and finally absorb them in a new totality. He calls it 'the process of Indianization', since, according to him, the end-product was always much different from the source-material, and, in a sense, it was Indian<sup>2</sup>. Probably no other part of protohistoric Indo-Pakistan sub-continent proves the validity of these observations more convincingly than the hilly tracts of Baluchistan which sheltered the successive waves of diversified semi-nomadic communities of Iranian and Central Asian origin.

It was in 1926 that this region was systematically explored for the first time by Sir Aurel Stein<sup>3</sup>. It was followed by several localized explorations by Fairservis, De-Cardi, Casal and others; the latest being one conducted by Enault and Jarrige, and also M.R. Mughal<sup>4</sup>. These archaeological reconnaissances have placed before us

1. Sankalia, *Prehistory and Protohistory in India and Pakistan*, pp. I, VIII.
2. Malik, *Indian Civilization : The Formative Period*, pp. 60 ff. In the context of protohistoric India it was, obviously, regional and not pan-Indian.
3. Stein, *An Archaeological Tour in Waziristan and Northern Baluchistan*, *MASI*, No. 37, Calcutta, 1929, and *An Archaeological Tour in Gedrosia*, *MASI*, No. 43, 1931.
4. Enault and Jarrige, "Chalcolithic Pottery from four sites in the Bolan area of Baluchistan, West Pakistan", *South Asian Archaeology* (1973), pp. 181-196. Also, Mughal, "Explorations in Northern Baluchistan, 1972, New Evidence and Fresh Interpretation", cyclostyled copy, pp. 1-15, also *Pakistan Archaeology*, No. 8, pp. 113-158.

a hoard of antiquities comprising mostly painted pot-sherds, stone blades points and arrowheads, and copper implements to assess and get convinced that the migrating hordes came to Baluchistan from Iranian coastal regions as well as from the rugged hilly tracts of eastern Iran, and Central Asian Republics of the U.S.S.R. particularly, Turkmenia and Uzbekistan<sup>1</sup>. Excavations conducted recently on scientific lines at some of the important sites, in and outside Baluchistan (Fig. 10) such as Kile-Ghul-Mohammad<sup>2</sup>, Damb Sadaat<sup>3</sup>, Amri<sup>4</sup>, Deh Morasi Ghundai<sup>5</sup>, Gumla<sup>6</sup>, Sarai Khola<sup>7</sup>, and Jalilpur<sup>8</sup> have clearly shown that the basal culture-complex of north-western India, on which the West Asian people impinged their decorated pottery, was neolithic, i.e., people were domesticating animals and using simple stone flake and blade tools; at some places the complex was devoid of pottery, and at others it was marked by simple hand-made ceramics, sometimes with burnished surface. They have further demonstrated that after their initial settlement, the newcomers, fortified with the knowledge of copper metallurgy as well as wheel-made and richly painted pottery, started intermixing among themselves, and also with the others coming from the Indus Valley on the east, and Sistan<sup>9</sup>, Afghanistan and Iran in the west. The protohistory of Baluchistan is, therefore, a very complex story of cross-currents of peoples coming from the west and the east with a net-work of diversified pottery groups, settlement planning and burial practices. Wide-spread cultural contacts in the form of give-and-take leading to 'transculturation' or 'aculturation', as evidenced in pottery forms, was the hall-mark of the protohistoric period of Baluchistan, roughly bracketed between 4000 and 2000 B.C. on the basis of Radiocarbon dating<sup>10</sup> and other methods (Fig. 11).

An attempt has been made in this chapter to collect and analyse the different traits of these early chalcolithic cultures of Baluchistan, and establish the nature of

1. Stein, *Archaeological Reconnaissances in North-Western India and South-Eastern Iran*, 1937.
2. Fairervis, *Excavations in Quetta Valley*, 1956; *The Roots of Ancient India*, 1971, pp. 147 ff.
3. *Ibid.*
4. Casal, *Fouilles D' Amri*, 1964.
5. Dupree, "Deh Morasi Ghundai : A Chalcolithic Site in South Central Afghanistan", *APAMNH*, 50, 1963.
6. Dani, "Excavations in the Gomal Valley", *AP*, Vol. V (1970-71), pp. 1-176.
7. Khan, "Excavations at Sarai Khola", *Pakistan Archaeology*, No. 5 (1965).
8. Mughal, "New Evidence of the Early Harappa Culture from Jalilpur, Pakistan", *Archaeology*, Vol. 27, No. 2 (1974) pp. 106-113.
9. Biscione, "Dynamics of an early South Asian Urbanisation : the First Period of Shahr-i-Sokhta and its connections with Southern Turkmenia", *South Asian Archaeology* (1973), pp. 105-118.
10. Agrawal and Kusumgar, *Prehistoric Chronology and Radiocarbon Dating in India*, pp. 79-87; Allchin and Allchin, *The Birth of Indian Civilization*, p. 105, 335-37; Dales, "Archaeological and Radiocarbon chronologies for protohistoric South Asia", *South Asian Archaeology*, 1973, pp. 157-170.

the contacts of these cultures with those of West Asia. In our analysis, we will be considering sites located not only in Pakistan and Iran but also in Afghanistan through which north Iranian peoples came into northern Baluchistan and moved further east into the upper Indus basin. These sites are Mundigak<sup>1</sup>, Quetta<sup>2</sup>, Amri<sup>3</sup>, Nal<sup>4</sup>, Kulli<sup>5</sup>, Mehi<sup>6</sup>, Nundara, Dabarkot, Periano Ghundai<sup>7</sup>, Rana Ghundai<sup>8</sup>, Moghul Ghundai<sup>9</sup>, Sur Jangal<sup>10</sup>, Zhob, Loralai<sup>11</sup>, Gumla<sup>12</sup>, Hissar<sup>13</sup>, Sialk<sup>14</sup>, Susa<sup>15</sup>, etc. (Fig. 12).

The region under consideration extends from the Himalayan foot-hills and Waziristan uplands on the north to the Makran Coast on the south, and from Siestan and east Iranian plateau on the west to the western Indus plains on the east. Today this area comprises mainly barren mountains and deserts, and sandy wastes, falling west of the monsoonal belt, the annual rainfall often less than 10 inches, but there was a time in the remote past when it was likely to have been comparatively a little more fertile and hospitable for human life, at least in the arterial valleys of northern Baluchistan than at present<sup>16</sup>. Mughal has recently shown that in northern Baluchistan alone, i.e., in Kalat, Quetta-Pishin, Loralai, and Zhob, the largest number of explored sites belong to 3rd millennium B.C.—56 against only 22 of the 2nd and 1st millennia B.C., and only 20 of the Early Historical period<sup>17</sup>. However, ecologically, the country has never been different from eastern Iran, an important factor in inducing a migrating people to settle down here and feel homely.

1. Casal, *Fouilles de Mundigak*, 2 Vols.
2. Fairervis, *Excavations in the Quetta Valley*, 1956.
3. Casal, *Fouilles d' Amri*, Vol. 2, 1964 ; Majumdar, *Explorations in Sind*, MASI, No. 48, 1934.
4. Hargreaves, *Explorations in Baluchistan*, MASI, No. 35, 1929.
5. Piggott, *Prehistoric India*, p. 96.
6. *Ibid.*, pp. 110-113.
7. Gordon, *The Prehistoric Background of Indian Culture*, pp. 47-53.
8. Ross, "A Chalcolithic Site in North Baluchistan", JNES, Vol. 5, 1946 ; Fairervis, *An Archaeological Survey in the Zhob and Loralai Districts*, 1959.
9. Gordon, *The Prehistoric Background of Indian Culture*, 44-53 ; Piggott, *Prehistoric India*, 1950.
10. Ross, *op. cit.*
11. Fairervis, *An Archaeological Survey in the Zhob and Loralai Districts*, 1959.
12. Dani, "Excavations in the Gomal Valley", AP, Vol. V, (1970-71), pp. 1-176.
13. Schmidt, *Excavations at Tepe Hissar, Damghan*, 1937; also Piggott, "Dating the Hissar sequence; The Indian Evidence", Antiquity, Vol. XVII, No. 68 (1943), pp. 169-182.
14. Ghirshman, *Fouilles de Sialk pres Kashan* (1933, 1934, 1937), 1938-1939, Vols. IV-V.
15. *Memoirs de la Delegation on Perse*, Vol. XII. 69.
16. Raikes and Dyson, "The Prehistoric Climate of Baluchistan and the Indus Valley", *American Anthropologist*, Vol. 63 (1961), pp. 265-281; Leshnik, "Land use and ecological factors in prehistoric North-West India", *South Asian Archaeology* (1973), pp. 67-84.
17. Mughal, "A Summary of Excavations and Explorations in Pakistan" *Pakistan Archaeology*, No. 8, pp. 113-158.

It may be stated at the outset that since the central purpose of this chapter is to bring out in relief the process of tripartite cultural contacts of protohistoric Baluchistan, Afghanistan and, Iran and, to some extent Central Asia also, we will not be considering the details of each of the protohistoric cultures of these regions; instead we will pick out the most relevant pieces of evidence from these culture-complexes and piece them together to reconstruct the picture of Baluchistan's contacts with the neighbouring regions.

After the initial Old Stone Age cultures, Iran, Central Asia, Afghanistan, Baluchistan and Gandhara regions witnessed the emergence of neolithic cultures which have been discovered at widely separated sites, such as Sialk, Djaitun Depe, Deh Morasi Ghundai, Gumla, Damb Sadaat, and Sarai Khola. By and large, they seem to be the direct descendants of the preceding mesolithic cultures since in all of them a preponderance of tools made on stone blades and bladelets is seen; polished stone-celts, and Burnished Grey Ware are only rarely found, such as at Sarai Khola, but not at Gumla and other places. Moreover, there is no definite evidence for the emergence of painted pottery tradition and copper-bronze technology at any stage in these neolithic cultures except in Iran, Central Asia and Afghanistan. The beginning of the chalcolithic culture in Baluchistan has, therefore, to be traced in Afghanistan, Iran and Central Asia.

Pottery provides us the primary clue for contacts between the different cultures under review. As observed earlier, Piggott<sup>1</sup> as far back as 1950 made a broad, and somewhat rough classification of the prehistoric cultures of Baluchistan on the basis of the techniques and designs used in pottery-making and designs and techniques of painting. In doing it he was following Mc. Cown's classification of Iranian Cultures<sup>2</sup>. Following Piggott, therefore, we have in the south several Buff Ware assemblages, sometimes called 'cultures', and in the north, Red Ware assemblages or 'cultures'. Both these groups comprise the following cultures, designated after the typesites<sup>3</sup>. The former group includes, Quetta, Amri-Nal and Kulli cultures while the latter includes the Zhob-culture. It may, however, be pointed out that this division has become a little outside in the light of subsequent findings, particularly those carried out by De Cardi<sup>4</sup> and Mughal<sup>5</sup> and emphasized by Khan<sup>6</sup>. In the above-mentioned buff ware region the red ware is also met with at several sites, as at

1. Piggott, *Prehistoric India*, pp. 70 ff.

2. Mc Cown, *The Comparative Stratigraphy of Early Iran*, 1942; Piggott, *Prehistoric India*, p. 72.

3. Piggott, *Prehistoric India*, p. 72.

4. De Cardi, "New Wares and Fresh Problems from Baluchistan", *Antiquity*, XXXIII, pp. 15-28.

5. Mughal, *op. cit.*, pp. 1-15.

6. Khan, *Indus Valley and Early Iran*, 1964, p. 21.

Kile-Ghul-Mohammad, Damb Sadaat II & III<sup>1</sup>. Thus, although for convenience sake we may sometimes be following Piggott's broad classification, our approach will not be fully based on that.

### Previous Work

When Sir John Marshall published his *Mohenjo-daro and Indus Valley Civilization*, materials for comparison were available only from a very few sites of West Asia. Subsequently Mackay, with his wide experience in the archaeology of Western Asia, provided some more evidence for building up a comparative chronology of the Bronze Age Civilization of India. Shortly afterwards, attention was focussed on the intervening areas of Baluchistan and Iran to trace the connecting link between the civilization of the Indus and those flourishing in West Asia. For several years sporadic explorations and excavations were conducted, but the results were best synthesized by Piggott in 1950 who made three regional cultural divisions : (i) North Baluchistan, (ii) South Baluchistan, and (iii) Sind and Punjab. The cultural materials of these three regions were then examined in the archaeological perspective of Iraq, Iran and Caucasusia. In a restricted sense, these divisions still hold good, although their material contents had to be re-defined in the light of fresh discoveries.

Baluchistan, however, remained the primary region for archaeologists concerning the discovery of the origins of the Indus Valley Civilization. Beatrice De Cardi discovered a new ceramic evidence in Central Baluchistan and concentrated her attention on sites like Anjira and Siah Damb in Kalat. On the other hand, Fairservis made an intensive survey of northern Baluchistan. While his brief survey of the sites in the Zhob Valley did not materially change the chronology previously inferred by Piggott, on the basis of Brigadier Ross's work at Rana Ghundai, Fairservis made a useful contribution by excavating at Kile-Ghul-Mohammad and Damb Sadaat in the Quetta Valley. Fairservis has compared his sequence with the one obtained at the important site of Mundigak in southern Afghanistan. The connections sought earlier with distant sites in West Asia and Iran, had, after all, not brought about encouraging results. It was more or less, clear that very little was to be expected from the south-western Baluchistan. Hence, the only route open was through northern Baluchistan, and this route must cross Afghanistan. From now onwards efforts were concentrated on the materials from Afghanistan. Of these, the work of Fairservis as contained in his *Archaeological Studies in the Seistan Basin of South Western Afghanistan and Eastern Iran* (New York, 1961) is important but his "prehistoric sites" could not add substantially to formulate definite chronology. The results of Louis Dupree envisaged in his *Deh Morasi Ghundai : A Chalcolithic Site of South-Central Afghanistan* (New York, 1963) proved more

1. De Cardi, *op. cit.*

significant. Dupree, it may be noted, views his materials in the light of Mundigak. Mundigak has proved to be the most important site in southern Afghanistan for providing not only a time-sequence to judge the evolution of the chalcolithic cultures in Baluchistan but also as an intermediate station to pass on the material cultures received from further west and north.

In the meanwhile another chronological sequence was worked out by Dales in *A suggested Chronology for Afghanistan, Baluchistan and the Indus Valley* (published in *Chronologies in the Old World Archaeology*, Chicago, 1965). In his scheme of things one cave site, of Ghar-e-Mar in northern Afghanistan, and two West-Indian sites have been added. The scheme has been prepared on the assumed sequence of six phases, numbered from A to F, and generalised from a broad study of the idealised cultures, rather, 'cultural levels'. One significant cautionary note has been added by Dales. The phase descriptions show that many elements of the early assemblages—down to our phase E—appear first in Afghanistan and subsequently spread out through Baluchistan to the Indus Valley. The few available radio-carbon dates suggest the same pattern<sup>1</sup>. Somewhat similar model has been suggested by Gupta also<sup>2</sup>.

More recently, Dani's explorations in Gomal Valley, followed by excavations at Gumla, in the same region of the upper Indus basin, has yielded a sequence of cultural deposits starting from preceramic Neolithic (Period I) through early chalcolithic (Period II), Kot Diji pre-Harappan (Period III), Harappan (Period IV), to comparatively recent periods. His comparative 'study of cultures' opened up a new possibility of better understanding the links between the Bronze Age Civilization of the valleys of the Indus in Pakistan and of the Arghandab in southern Afghanistan. The Gomal route, is the shortest between the two valleys and the excavations here have produced a time scale to view their cultural material in their true sequence<sup>3</sup>.

The latest works, as said earlier, comprise of explorations conducted by Mughal in northern Baluchistan<sup>4</sup> and a review of the excavation results of Shahr-i-Sokhta by Biscione<sup>5</sup>. It should, however, not be imagined that India's contacts with West Asian countries during this period were confined to the northern route of north Iran, south Afghanistan, north Baluchistan and the Gomal Valley; clear hints are also available for similar contacts through the southern route : south Mesopotamia, south Iran, southern Baluchistan and southern Sind. Recent excavations at Tepe

1. Dani, *op. cit.*
2. Gupta, "A Model for understanding the First Urbanization in India", *Puratattva*, No. 6, pp. 42-50.
3. Dani, *op. cit.*
4. Mughal, *op. cit.*
5. Biscione, *op. cit.*

Yahya conducted by Lamberg-Karlovsky<sup>1</sup> have yielded several items of steatite, bone and pottery emphasizing the role the southern route played in the east-west contacts. Mughal<sup>2</sup> and During Caspers<sup>3</sup> have worked it out in great details.

Both in Failka and Bahrain islands the Danish expeditions under Glob have excavated a number of sites where Kulli type pottery has been found along with seals having figures inspired by Harappan motifs<sup>4</sup>. Such a situation implies the use of southern route—sea or land—by the people of southern Baluchistan.

This, in short, is the present state of research on the early chalcolithic cultures of Baluchistan *vis-a-vis* West Asian cultures. In the following study we will be considering both, the older studies made by Stein and Piggott and the recent studies made by Mughal, Fairservis, Allchin, Dani, Dales, During Caspers, Durrani, Lamberg-Karlovsky, Khan, Tosi and others.

### Mundigak Evidence

The study of early village cultures in northern Baluchistan should, therefore, begin with Mundigak to be an important station on the natural northern route for the inflow of new influences from Iran into Baluchistan<sup>5</sup>. The site is situated on a dry tributary of the Arghandab river. Excavations revealed five phases of the earliest period of occupation (pd. I). A terracotta figurine of humped bull, painted pottery, bone awls, alabaster vases, stone blades and beads of lapis lazuli, etc., have been found in these levels<sup>6</sup>. Of the five sub-phases of pd. I painted black-on-red pottery is found from sub-phase 2 onwards. This is the most important evidence in favour of Mundigak being the intermediary station for the Iranian cultures to come into northern Baluchistan. On the one hand, the pottery of sub-phases 2 and 3 is found in the nearby Quetta Valley at Kile-Ghul-Mohammad and on the other it has the closest typological similarity with the assemblage of wheel-made painted black-on-red ware met with at Chashmai Ali (Fig. 13), in northern Iran. Similarly, 'the succeeding phases 4 and 5, contain not only the examples of Kile-Ghul-Mohammad vases but add jars and cups and design repertoire, including black and red polychrome painting, familiar in Quetta as the Kechi Beg Ware, and which, in turn, have their equivalents in

- 1.(a) Lamberg-Karlovsky, *Excavations at Tepe Yahya, Iran, 1967—69*, Progress Report I (*American School of Prehistoric Research Bull.*, Mass.), 1970.
- (b) Lamberg-Karlovsky, and Philip L. Khrol, "Early Bronze Age of Iran as seen from Tepe Yahya", *Expedition*, Vol. 13, (nos. 3-4), 1971, pp. 14-21.
2. Mughal, *Present State of Research on the Indus Valley Civilization*, 1973.
3. During Caspers, "Further Evidence for cultural relations between India, Baluchistan and Iran and Mesopotamia in Early Dynastic times", *JNES*, Vol. XXIV, 1-2, 1965, pp. 53-55.
4. Thorvildsen, "Burial Cairns on Umm-an-Nar", *Kuml*, 1962, pp. 208-219. Figs. 21-23.
5. Allchin and Allchin, *op. cit.*, p. 104; Dani, "Excavations in the Gomal Valley", *AP*, Vol. V, (1970-71); Casal, *Fouilles de Mundigak*, 1961.
6. Casal, *Ibid.*

the early Hissar culture of north-eastern Iran, as discovered in Hissar IA, Sialk III, etc., levels<sup>1</sup>.

Further, 'figurines of cattle begin to appear in phase 3 and those of humans in phase 4, but both copper and alabaster were apparently used from at least phase 2 on'. Interestingly enough, handmade pottery occurs in all phases but in a decided minority. The excavator rightfully comments that this whole period seems to reflect the arrival of a culture already full-blown<sup>2</sup>. The third period of Mundigak reveals an extremely strong Iranian influence on the local pottery and tools. The artefacts found in this settlement are similar to those in the middle levels of Sialk and Hissar<sup>3</sup>. In this phase, for the first time<sup>4</sup>, both bichrome and polychrome paintings have been noticed. According to Dales, this tradition of using multicolour designs comes from West Asia<sup>5</sup>. It is significant that the ceramics of this period is identical with those of the so-called Quetta Ware<sup>6</sup> in many respects.

Iranian culture-trait, however, did not come to Baluchistan from Mundigak alone; Deh Morasi Ghundai, in South-Central Afghanistan, also played important role in transmitting these to Baluchistan<sup>7</sup>.

### Quetta Culture

Quetta valley is situated slightly over 5000 feet above sea level. The valley is narrow rarely exceeding ten kilometers in width, and its longer axis is generally along north-south<sup>8</sup>. A few sites of the Quetta region, including Quetta Miri<sup>9</sup>, Kile-Ghul-Mohammad<sup>10</sup>, Damb Sadaat<sup>11</sup>, Ahmad Khanzai<sup>12</sup> and Mian Ghundai<sup>13</sup>, have yielded

1. Fairervis, *The Roots of Ancient India*.
2. *Ibid.*, p. 127.
3. Allchin and Allchin, *op. cit.*, p. 106 ; Agrawal, *The Copper Bronze Age in India*, p. 13.
4. Agrawal, *Ibid.*, pp. 13-14.
5. Dales, in Agrawal's *The Copper Bronze Age in India*, p. 14.
6. Piggott, "A New Prehistoric Ceramic from Baluchistan", *AI*, No. 3 (1947), pp. 131-142, Figs. 2, 3 and 4.
7. Dupree, "Deh Morasi Ghundai : a Chalcolithic Site in South Central Afghanistan", *APAMNH* Vol. 50, 1963, pp. 57-136.
8. Fairervis, *Excavations in the Quetta Valley*, p. 183.
9. *Ibid.*, p. 197. Quetta Miri yielded the pot-sherds which can be put in the same group (Quetta Ware) and at present can be seen in the Antiquity Section of the Archaeological Survey of India.
10. *Ibid.*, p. 198. Kile-Ghul-Mohammad is situated on the north side of the road from Quetta to Babli by the fourth mile stone.
11. *Ibid.*, p. 203.
12. *Ibid.*, p. 197. Two other sites can be designated with the name of Ahmad Khanzai, north and south from the adjacent fruit farm. The collection of sherds now lies in the Antiquity Section of the Archaeological Survey of India, New Delhi. The site yielded pot-sherds of Quetta Ware in large number.
13. *Ibid.*, p. 202. Mian Ghundai yielded The Quetta Pottery.

the Quetta Ware. Recently, three more sites have been added to this list, Rizvi Karuna, Jagjai and Lahar<sup>1</sup>.

All these sites lie within sight and easy access from a main tarmac road, a few kilometres outside Quetta. The pottery of these sites, by and large, belongs to the buff ware group. However, sometimes, red ware is also found. Generally the purplish brown (black) paint is used on a pinkish white or greenish surface<sup>2</sup> for its decoration. The major types include beakers with a slightly flaring mouth, squat biconical or globular bowls, shallow dishes and feet-stand<sup>3</sup>.

Finally, we must extend our field of study and correlate the sequence of prehistoric Indian cultures with the prehistoric culture-sequence of Iran and Iraq, where adequate excavation and intensive comparative study over a number of years have shown a sound chronological sequence. It must be noted that all evidence seems to be more or less consistent with the view that, to begin with the prehistoric cultures of north-western India were, by and large, derived from Iran and Sistan.

Let us take the Quetta Ware which is predominantly buff. Its parallels can be seen only in West Asia, (Sialk and Hissar) Central Asia and Sistan. Piggott has rightly noted that this ware bears close resemblance to the wares from Tal-i-Bakun, Susa I, Giyan V, Sialk III, Ninveh V and Anau<sup>4</sup> both in form and painted designs. Further, Stein notes that the designs on pot-sherds particularly the geometric forms, discovered at Chah Husaini and Qala-i-Sardagarh in Persian Makran can be correlated with those from Tal-i-Iblis in the Nihang valley and in the Quetta Valley<sup>5</sup> (Fig. 14).

The earliest wheel-made pottery with designs extended in black over red slip appeared in Kile-Ghul-Mohammad II and III. They have their counterparts at Hissar and Halaf. This fact clearly suggests that this black-on-red ware originated in northern Iran<sup>6</sup>. It may also be mentioned that pottery from Period III of Kile-Ghul-Mohammad shows close similarity with Hissar I pottery<sup>7</sup>. In this connection certain motifs may be considered. The diagonal stepped motif (Fig. 15.1) with an oblique oval element was peculiar to the buff ware of Baluchistan. It is significant to note that it was quite popular at a number of sites in the neighbouring countries, at sites

1. Mughal, *op. cit.*
2. Fairservis, *op. cit.*, pp. 242-269.
3. *Ibid.*
4. Piggott, *Prehistoric India*, p. 75 ; Wheeler, *Indus Civilization*, p. 13 ; Lal, "Protohistoric Investigation", *AI*, No. 9, 1953, p. 83.
5. Stein, *Archaeological Reconnaissance in North-Western India & South-Eastern Iran*, pl. IX, Sar. 1, 2, 3, 4.
6. Fairservis, "The Chronology of the Harappan Civilization and the Aryan invasions", *Man*, 56, 1956, p. 154 ; Agrawal, *The Copper Bronze Age in India*, pp. 15-66.
7. Subbarao, *The Personality of India*, p. 92.

like Tal-i-Bakun, Susa I, Musyan, Giyan V, Siestan, Anau-II, etc.<sup>1</sup> The motif seems to have been imported into India.

The fragments of a vessel from Quetta Valley present the thick and thin chevron motif (Fig. 15.2), which was frequently used in Susa I<sup>2</sup>. Vertically hatched chevron<sup>3</sup> (Fig. 15.3) and thin chevron-line or zig-zag lines<sup>4</sup> (Fig. 15.4) were carved on the pot-sherds of the Quetta ware. The former occurs in Fars (in Giyan V) while the latter can be noticed not only on the above mentioned sites but also at Tal-i-Bakun, Susa I, etc.

Another noteworthy pattern is the "opposed triangles"<sup>5</sup> (Fig. 15.5) noticed on the Quetta pottery which has exact parallels at Al 'Ubaid Jamdat Nasr' (Fig. 16.10, 11) in Fars, at Susa I and Musyan, Giyan V, in Siestan and curiously enough in Crete (Fig. 16.12,13,14) and Honan in China<sup>6</sup> (Fig. 16. 15). The same applies to the thin-line step pattern<sup>7</sup> (Fig. 15. 6) which can be seen at the same sites, other than Al 'Ubaid and Giyan V.

The diagonally divided squares<sup>8</sup> (Fig. 15. 7) commonly used at Al' Ubaid, Tal-i-Bakun, Fars, Musyan and Giyan V, are found in the Quetta assemblage too, but sparsely. Degenerate thin line step motif<sup>9</sup> (Fig. 15. 8) was known at 'Tal-i-Bakun and Al' Ubaid as also at Quetta. Tree motif<sup>10</sup> (Fig. 16.16,17) has also been used on the Quetta Ware in its basic design and its parallels can be seen in Mesopotamia (Fig. 16. 18, 19).

The stemmed goblets<sup>11</sup> (Fig. 15.12) of Quetta Pottery resemble the specimens of the same type of pots found only at Sialk III and Giyan V. The perforated foot-stand (Fig. 15.9) is rather a peculiar type but its triangular perforations have similarity in the Samarra and Musyan wares and the cross hatching design is met with at Tal-i-Bakun and elsewhere in Fars<sup>12</sup>.

The alabaster cups (Fig. 15.10) from Quetta<sup>13</sup> have parallels at Susa I and

1. Piggott, "A New Prehistoric Ceramics from Baluchistan", *AI*, No. 3, p. 138, pl. Q.1, Q.8, Q. 10, Q. 11, Q. 13, Q. 60.
2. *Ibid.*, p. 138, pl. Q.14, Q.18.
3. *Ibid.*, p. 138, pl. Q.19, Q.20.
4. *Ibid.*, pl. Q.21-Q.23 & Q.25.
5. *Ibid.*, Pl. Q.27, Q.30, Q.31a, Q.33.
6. Herzfeld, *Iran in the Ancient East*, p. 41; Gajjar, *Ancient Indian Art and the West*, p. 5.
7. Piggott, "A New Prehistoric Ceramics from Baluchistan", *AI*, No. 3, pl. Q.29 & Q. 32.
8. *Ibid.*, pl. Q.34.
9. *Ibid.*, pl. Q.35 & Q. 45.
10. Gajjar, *op. cit.*, p. 6, Fig. 26, 27, 28, 29.
11. Piggott, "A New Prehistoric Ceramics from Baluchistan", *AI* No. 3, Pl. Q.46, Q.47.
12. *Ibid.*, pl. Q. 48.
13. *Ibid.*, pl. Q.57, 58.

Musyan, although they have been obtained from most of the buff ware sites. The beaker<sup>1</sup> has been found on all the buff ware sites from Iraq to Baluchistan. The shallow bowls (Fig. 15.11) are not so common; they were generally absent in Baluchistan excluding, of course, Sur Jungal, but they are well-distributed in Sistan, Fars and Susa<sup>2</sup>.

Two Soviet archaeologists, Masson and Sarianidi, have recently suggested that the decorative style of the Quetta Painted Wares owes its inspiration originally from south-eastern Iran through the intermediary of southern Turkmenia<sup>3</sup>. The view has been endorsed by Biscione<sup>4</sup> since the painted designs of the Quetta Ware have parallels in Namazga III. He further suggests that from Turkmenia it came to Sistan, at Shahr-i-Sokhta I and from there it is likely to have come to Afghanistan, at Mundigak III—all these levels are datable to 3000 B.C. He writes "the birth-place of Quetta Ware was southern Turkmenia, and its spreading over so wide an area was a later phenomenon"<sup>5</sup>. (Pl. Ia)

Besides pottery, there are several items which also throw some light on the contacts of Quetta with West Asia. As regards architecture, there is a wall built during period I which still stands at Damb Sadaat (12 feet high and extends in one direction for over 50 feet). But for what purpose it was constructed is not certain. The walls of the temples of Sumer and Babylon have a similar look. This may suggest that the structure was connected with religion<sup>6</sup>. One of the most striking discoveries bearing on the cultural contacts of Quetta with West Asia is the skeleton of an Indian bull in Kile-Ghul-Mohammad I. However, it is rather curious that its teeth were larger than the normal teeth of '*Bos Indicus*'. It has been suggested that it could have been a cross between *Bos Indicus* and the West Asian Urus<sup>7</sup>.

After going through the available evidence from the Quetta Valley, it appears that most of the cultural elements had been derived from Iran. The types of houses, doors, plain and painted pots, bread ovens, sheep, goats, cattle, the image of mother goddess, etc., found in the Quetta Valley show strong imprint of the contemporary Iranian culture. Recently, Mughal discovered 'a unique laurel shaped flint arrow-head at Lahar which is strikingly similar to the numerous arrowheads reported from

1. Piggott, "A New Prehistoric Ceramics from Baluchistan", *AI*, No. 3, pl. Q. 14.
2. *Ibid.*, p. 138, Pl. Q. 59 to Q.61.
3. Masson, and Sarianidi, *Central Asia : Turkmenia before the Achaemenids* p. 96.
4. Biscione, *op. cit.*; Tosi, "Excavations at Shahr-i-Sokhta", *East and West*, Vol. XIX, pp. 283-386.
5. Biscione, *Ibid.*, p. 105.
6. Fairervis, *Excavations in the Quetta Valley*, p. 213. Stein noticed such a type of fortifications in Central Asia at a number of sites. There is a suggestion that it also served the same purpose.
7. Subbarao, *op. cit.* p. 92, Fairervis, *Excavations in Quetta Valley*, p. 392.

the Rud-i-Biyaban group of sites in Siestan, Shahr-i-Sokhta, Hissar II-III, and Susa A in Iran and Tepe Gawra in northern Iraq<sup>1</sup>. Probably the nomadic population migrated to the Quetta Valley because of the attraction of the fertile soil and water supply there. And with them came their culture which impinged upon the indigenous culture which was still neolithic. Fairservis, however, also noticed a few Indus Valley elements in the Quetta culture. He writes : "It is true that some design-elements on the pottery were derived from designs characteristic of the Indus Valley, such as the Brahma bull and pipal leaf, but in addition, the desert ibex and the desert antelope of Iranian origin are also depicted. The Iranian orientation is, therefore, clear. The Iranian character of these Baluchi assemblages was probably further reinforced by continued and augmented contacts with the Iranian cultures in Siestan and southern Baluchistan. The wide distribution of characteristic wares, such as those of Amri and Quetta, indicates the extent of the contacts. It is clear that there is a strong diffusion of influence from Iran"<sup>1</sup>. A similar view was expressed earlier by Gordon also<sup>2</sup>.

Once the movement of West Asian cultural traits, particularly from north Iranian sites started infiltrating the neolithic fabric of southern Afghanistan and northern Baluchistan, it found a natural outlet in two directions—towards the east, through the Gomal Pass to the middle-to-upper Indus basin, and towards the central and southern Baluchistan.

### Gumla Culture

The culture has been identified by A.H. Dani<sup>4</sup> at a number of sites in the Gomal Valley as far back as 1967. Proper excavations were carried out by Dani in 1971 only at Gumla. Although the cultural deposit has been divided from bottom upwards into six periods, I to VI, only I to IV are protohistoric. Period I marks the first settlement at the site. Although no structure has been encountered in the habitational levels of this period, community ovens, bones of domesticated animals and microlithic tools establish the neolithic character of the economy of the people. After a slight gap in the habitation, the site was once again occupied, but by a group of people who brought with them the knowledge of producing a very fine wheel-made painted pottery, terracotta figurines, bangles, gamesmen, and toy-cart. They also knew technology and they engaged themselves in agriculture. These were certainly the people who carried with them three traditions : the north Iranian (Early Hissar),

1. Mughal, *op. cit.*, p. 5.

2. Fairservis, *Excavations in the Quetta Valley*, p. 360.

3. Gordon, "Sialk, Giyan, Hissar and the Indo-Iranian connections", *Man in India*, Vol. XXVII, 1947, pp. 195-241.

4. Dani, *op. cit.*

the south Afghan (Mundigak III) and the north Baluchi (Rana Ghundai II and III, and Sur Jungal II); the designs painted on pots and pot-forms clearly establish this fact (Fig. 17).

The site was once again deserted for sometime and occupied afresh by a new wave of people in period III. The culture-complex shows some significant elements in pot-shapes and painted designs, such as broad black bands round the neck, which connect them with the Kot Diji complex of early third millennium B.C. (Fig. 18). For the first time mud-brick structures, a new type of terracotta figurines, a 'horned deity' (Fig. 19) depicted in paintings on pots, etc., make their appearance. Curiously, enough, however, the older (Period II) pottery traditions still continued, a fact which shows that although there was some time gap between Period II and Period III, in the make-up of Period III culture the contribution of Period II people was no less. It also shows that the origin of the Kot Diji culture may lie in this mixed assemblage of Period II and Period III. In that case, it is also clear that in the process of First Colonization of the Indus basin, the contribution of the Irano-Baluchistan cultures was decisive. Period IV was Harappan, and does not concern us here.

Further, Dani has rightly individualized the Gumla culture in the Period II assemblage which is a pre-Kot Diji assemblage. It can easily be dated to 3000 B.C. Gumla culture is, therefore, the earliest chalcolithic culture of the Gumla-Indus plains which clearly establishes the migration of Iranian cultural traits into India through the northern route.

V2:7°C L6

### Kot Diji

127390

In recent years, another pre-Harappan culture has come to light, mainly due to the works of Khan<sup>1</sup>, Mughal<sup>2</sup> and Lal<sup>3</sup>. It is known as the Kot Diji culture, named after the site where it was first identified. The remains of this culture include a kind of red ware, both handmade and wheelmade, with characteristic paintings in black which include not only geometric designs but also some items of the plant and animal worlds. Jars with broad black bands round the neck, and globular vessels with flanged rim are often found in this assemblage both at Kot Diji and Amri (Fig. 20). Scholars believe that these two types came from Periano Ghundai in the Zhob Valley<sup>4</sup>. At Kalibangan, the pre-Harappan Kot Diji pottery-complex (Fig. 21) has been divided into six groups on the basis of technique of manufacture, texture

1. Khan, "Excavations at Kot Diji", *Pakistan Archaeology*, No. 2 (1965), pp. 11-85; also, *Indus Valley and Early Iran*, 1964, pp. 41-54.
2. Mughal, *The Early Harappan Period in Greater Indus Valley*, (unpublished Ph.D. thesis, 1968).
3. Lal and Thapar, "Excavations at Kalibangan : New Light on Indus Civilization", *Cultural Forum*, No. 34, pp. 78-88.
4. Mughal, *op. cit.*, p. 163 (Fig. XIII) and p. 166 (Figs. 1 & 8).

of the clay, forms of the pots and painted designs on them<sup>1</sup>. Besides pottery, the Kot Diji complex includes objects made of copper and bronze, shell, terracotta, steatite, lapis lazuli and other semi-precious stones, etc., some of which clearly establish cultural or trade contacts of India with its western neighbours, although these contacts seem to be extremely limited. Thus, from the lowest levels of Mohenjo-daro, which may, according to Mughal belong to the Kot Diji complex on grounds of associated pottery, a carved steatite piece<sup>2</sup> of a vase has come which is comparable to those found in Iran and Mesopotamia of the Early Dynastic I—III period (2800—2400 B.C.). Steatite objects have also been found at Kalibangan. At Tepe Yahya in southern Iran, a number of steatite pot-sherd have been found in period IV-B level of early, 3rd mill. B.C. (Pl. I b). At Sarai Khola (Pd. II, Kot Diji levels) lapis lazuli beads have been found, the raw material of which could come only from Badakshan in Afghanistan<sup>3</sup>. From Kot Diji and Sarai Khola a few leaf shaped stone arrowheads have been recovered. Tools of this kind have been found at Mundigak (Afghanistan), Susa and Shah Tepe (Iran) and Tepe Gawra (Mesopotamia)<sup>4</sup>. Mughal has also brought to our notice certain other objects which have been found in the pre-Harappan context in India and outside India<sup>5</sup>. Thus, terracotta solid wheels and cart-frames have been reported from the early levels of Mohenjo-daro, Kalibangan I, Sarai Khola I, Namazga III-V, Anau III, Shah Tepe III, and Hissar III. He also quotes characteristic jar-covers from Mundigak, Shah Tepe, Kalibangan and other places. Painted designs, such as point-to-point triangles divided by group of vertical lines, pipal leaf triple from a common stem, etc., also occur at different places, the former at Amri (ID) and Mundigak (IV) (pipal leaf first appears in Mundigak III, central leaf flanked by a horn motif occurs at Kalibangan also).

Items of the above quoted kinds, as said earlier, give some hint of cultural or trade contacts between India and her western neighbours during the Kot Diji times, i.e, in the first half of the 3rd millennium B.C.

### Zhab Culture

In north Baluchistan the credit of producing Red Ware complex goes mainly to the Zhob Valley people after whom the culture has been designated. The explored and excavated sites in the Zhob Valley<sup>6</sup> have revealed the signs of early habitations,

1. Lal and Thapar, *op. cit.*
2. Mughal, *op. cit.*, p. 252-53.
3. *Ibid.*, p. 87.
4. *Ibid.*, pp. 86, 302, 303 and 615.
5. *Ibid.*, pp. 312-318.
6. The Zhob river flows north-eastwards from the mountains behind Quetta and Bolan Pass. The sites are a few : Moghul Ghundai, Periano Ghundai, Rana Ghundai, Sur Jungal, Moghal Kila, Loralai, etc.; Fairservis, *Archaeological Surveys in the Zhob and Loralai Districts*, 1959; Majumdar, "Explorations in Sind", *MASI*, No. 48, p. 151.

and produced such evidence by which the idea of a distinctive culture-complex can be formed. Brig. Ross conducted some excavations at Rana Ghundai and brought to light five phases of occupation there. The first phase was the period of nomadism and was characterised by the use of plain hand-made pottery, flint blades, tended cattle and residence in huts<sup>1</sup>. A comparison, though only in the broadest sense, can be made between this phase of Rana Ghundai I and the first settlement at Tel Hassuna in Mesopotamia<sup>2</sup>. In the second phase (Rana Ghundai II), the type of pottery was changed and it shows the presence of a developing culture. The people began to use a distinctive pottery, made on wheel and decorated in black paint on red or pale background. The decoration included the designs of the humped bull and black buck<sup>3</sup> (Fig. 22). It is noteworthy that the region is not the natural habitat of both bullock and buck; a fact that suggests the arrival of some new people in Baluchistan who brought that design with them<sup>4</sup>. The counterparts of these designs can be seen in Iran and northern Mesopotamia (Fig. 23) also; they might have been particularly derived from Hissar and Sialk<sup>5</sup>. Hissar I is peculiar to this zone of the Red Ware complex and Rana Ghundai II belongs to black-on-red ware group. The difference that is there in the depiction of animals on the vessels of both the complexes was due to the locally available wild fauna and the difference of domesticated animals in two separate cultures, otherwise they are very close to one another. Such resemblance indicates that both the complexes developed side by side<sup>6</sup>. The form of bowls can be compared with a class of bowls from northern Persia<sup>7</sup>. There are also one or two specimens of thin, hard grey ware bowls, decorated with black paint. Similar specimens have been reported from Quetta sites and from Siestan<sup>8</sup>.

At Sur Jungal, this phase can be compared favourably with Hissar I. It appears to be contemporary with Susa I, Giyan Vc, Sialk III, Anau IIB and Al'Ubaid period<sup>9</sup>.

In the Rana Ghundai III phase, the buff wares of Rana Ghundai II show

1. Ross, "A Chalcolithic Site in Northern Baluchistan", *JNES*, Vol. V, No. 4, (1946), pp. 291-315; Piggott, *Prehistoric India*, p. 121.
2. Piggott, *Ibid.*, p. 129.
3. Ross, "Chalcolithic Site in Nothern Baluchistan", *JNES*, Vol. V, No. 4, (1946), p. 289, Pl. IX. 1.
4. Subbarao, *op. cit.*, p. 92 ; Gordon, *The Prehistoric Background of Indian Culture*, p. 42.
5. Ross, "A Chalcolithic Site in North Baluchistan", *JNES*, Vol. V, 1946, pp. 289 ; Piggott, *Prehistoric India*, p. 122.
6. Piggott, *ibid.*, pp. 129-130.
7. *Ibid.* p. 122.
8. *Ibid.*, p. 126.
9. Piggott, "The Chronology of the Prehistoric North-West India", *AI*, No. 1, p. 20.

marked development<sup>1</sup>. Further, this phase presents the evidence of some mud-brick houses, the use of copper, clay figurines of women, etc<sup>2</sup>.

Some tall vases from Siestan are compared with the specimens from north Baluchistan<sup>3</sup>. Its parallels can also be seen at Anau where rimless and straight-shouldered pots with geometric patterns are known to occur<sup>4</sup>. Some sherds, bearing the hatched zone motif can be compared with the designs on the pot-fragments from Siestan<sup>5</sup>.

The Faiz Mohammad painted pots provide further links between India and Iran<sup>6</sup>. It can be seen in Rana Ghundai III, Sur Jungal III and Loralai also<sup>7</sup>. Similarly, Chhalgarhi, in West Pakistan, has yielded a striking kneeling figure (along with other Zhob figurines) which gives a typical Sumerian look<sup>8</sup>. (Pl. Ic). According to Gordon, there is a close affinity between the material from the Mughal Ghundai cairns and Sialk B Cemetery<sup>9</sup>. But now opinions are divided on this issue<sup>10</sup>.

#### Amri-Nal Culture

The second distinctive culture-complex which can be identified in southern region, is the one sometimes named as the Amri-Nal culture<sup>11</sup> after two sites, the former in Sind and the latter in southern Baluchistan. Its spread includes the area of Sind at the foot of the Kirthar range, the Las Bela region, the area between the Baran and Gaj rivers and south Baluchistan<sup>12</sup>. *It may, however, not be out of place to*

1. Piggott, *Prehistoric India*, p. 125.
2. *Ibid.*, pp. 122-129.
3. Majumdar, "Exploration in Sind", *MASI*, No. 48, p. 15.
4. Pumperley, *Explorations in Russian Turkestan*, Vol. 1, p. 135, Figs. 120, 121, 130.
5. Piggott, *Prehistoric India*, p. 126.
6. Fairervis, *Archaeological Surveys in the Zhob and Loralai Districts*, p. 361.
7. *Ibid.*
8. Gordon, *Prehistoric Background of Indian Culture*, p. 54, Plate VII.
9. Gordon, "Sialk, Giyan, Hissar and the Indo-Iranian connections", *Man in India*, Vol. XXVII, 1947; p. 195-241.
10. In the excavations at Tepe Yahya, the Londo Ware, which was supposed to be associated with the Cairn Burials of Baluchistan, has been discovered from the levels of the early centuries of the Christian era. Lamberg-Karlovsky, "The Cairn Burials of South-eastern Iran", *East and West*, NS, Vol. 18 (Nos. 3-4) 1968, pp. 269-76.
11. Casal, *Fouilles de Amri*; Dales, "Excavations at Bala Kot Pakistan, 1973", *Journal of Field Archaeology*, No. 1 (1974), pp. 1-22. Piggott, *Prehistoric India*, pp. 75-81. Following sites have revealed the remains of Amri-Nal culture—Kargushki Damb in Rakshan; Nundara, Bandhni in Sind; Pandi Wahi, Ghazishah, Dhillani-jo-Kot and Rodkan in Baluchistan, Sohr damb of Nal, Domb Buthi, Rohel-jo-kund, Kerchat, Asal, Zik, Hor Kalat and Pak in Kolwa, Mashkai, Chimri, Khozdar, Anjira and Siah Damb of Nundara. See, Allchin and Allchin, *op. cit.*, pp. 113-118; Fairervis, *The Roots of Ancient India*, pp. 175-179.
12. Allchin and Allchin, *op. cit.*, p. 76. This culture covered south Baluchistan from the head-waters of the Kech Kaur, north-eastwards through Kolwa, up to Mashkai Valley and to Nal in Jhalawan. It has been unearthed at Las Bela State at the southern end of the Baluchi mountains.

mention that clubbing of Nal and Amri is mainly due to our limited knowledge of the Nal culture, being based mainly on the Nal cemetery; it is just possible that two cultures were different. In fact, there is a marked difference not only in pot forms of the two assemblages but also in the painted designs over them. The older nomenclature has been followed only on grounds of familiarity and usage.

Antiquities from these sites include stone heads, seals, metal tools, earthen pots, etc. The settlement was of a village kind: people lived in thatched huts<sup>1</sup>. As already stated, for tracing the relationship of various cultures in Baluchistan one has to rely mainly on pottery but there are certain other objects of Amri-Nal culture complex which reveal clues of inter-connections. Amri and Nal both appear to belong to a broad pool of cultures, although as indicated earlier some divergent signs have been found side by side in all of them. Amri Ware has fine soft buff to light red base with white slip and black or reddish brown painted designs, mainly geometric, on it<sup>2</sup>. At Nal the pottery is pale of greenish buff with designs, mostly geometric but sometimes floral and faunal as well, e.g., hatched pipal leaf, cow and fish of different colours—red, black, yellow, blue, etc.<sup>3</sup> (Fig. 24). Excavations have brought to light different types of pottery comprising globular beakers shallow pedestal foot, bowl or offering stand, bucket etc.<sup>4</sup> The practice of decorating the pot with painted designs was continued through different phases<sup>5</sup>.

A comparison between the objects of Amri-Nal complex and of the prehistoric cultures of Mesopotamia and Iran reveals resemblance, though incipient between them. According to Wheeler, however, both the cultures (Amri and Nal) do not seem to have been associated with the Iranian series, the Nal culture seems to be of local origin<sup>6</sup>. But a close observation would show the correspondence, although in very abstract and broad terms. For example, the motif of loop with suspended lines was common to Amri (Fig. 16.1), Samarra (Fig. 16.2) and Tell Halaf (Fig. 16.3). Its variant form can be seen in Harappan culture also<sup>7</sup>. (Fig. 16.4). A vase from Amri (Fig. 16.5) presents a design of chequer board, which is more or less identical to the pattern from Ur (Fig. 16.16)<sup>8</sup>. Step motif<sup>9</sup> also occurs at Amri (Fig. 16.7) and its parallels can be seen at Tal-i-Bakun, Sialk and Susa (Fig. 16.9). Due to the

1. Piggott, *Prehistoric India*, pp. 76-85; Wheeler, *Indus Civilization*, p. 13.

2. Casal, *Fouilles de Amri*; Lal, "Protohistoric Investigation" *AI*, Vol. 9, p. 83.

3. Hargreaves, Excavation in Baluchistan, 1925, Sampur Mound, Mastung and Sohr Damb, Nal, *MASI*, No. 35 (1929); L., "Protohistoric Investigation", *AI*, Vol. 9, p. 83.

4. Piggott, *Prehistoric India*, pp. 8 'S, §6. Dales, *op. cit.*

5. Gordon, *The Prehistoric Background of Indian Culture*, p. 44. Panelled arrangement, black and white chequers, horizontal bands, solid diamonds corner to corner, hatched diamonds, small chevrons, loops, sigma ornament and scale pattern were frequently used in that period.

6. Wheeler, *Indus Civilization*, p. 14.

7. Gajjar, *op. cit.*, p. 3.

8. *Ibid.*

9. Starr, *Indus Valley Painted Pottery*, pp. 39-42.

use of ancillary red paint, the pottery is quite different from Persian series<sup>1</sup>. The vessels of Jamdat Nasr have only a general resemblance with the vessels of this culture<sup>2</sup>. A close similarity between the drawings of the animals of Nal and Nundara and the firm competent outlines seen on engraved bone and shell plaques of Early Dynastic Sumer might also be referred to this context<sup>3</sup>.

Probably the early stages of this culture have been influenced distantly by Iranian cultures, and in later stages it developed in isolation or changed due to the contacts with the Harappa culture. It appears that the Nal pottery was not influenced by the west Asiatic painted pottery<sup>4</sup>.

Copper tools, discovered at several sites of Amri-Nal culture-complex, have a large proportion of nickel in the composition of metal. This is also noticed in the copper objects found at Ur and Kish in Mesopotamia<sup>5</sup>. De Cardi conducted a few excavations in Kalat area in central Baluchistan. Five phases have been brought to light in Surab region (at Anjira and Siah Damb sites). A flake blade industry in chart has been noticed which can be compared with Sialk I and III<sup>6</sup> counterparts. Anjira II has revealed a parallel-sided flint blades which are similar to those found at Hissar I and Sialk III<sup>7</sup>. De Cardi has also tried to connect Anjira II with Sialk I on the basis of some similar motifs<sup>8</sup>, suggestive of relationship.

The evidence of stamp seals is also significant in this context. A number of Bronze Age cultures of Mesopotamia and Persia yielded stamp seals, but they rarely occurred in India of the pre-Harappan times. At Nal, in the cemetery, a steatite seal of irregular type engraved with the figure of a vulture with its foot on a snake, outlined and cross-hatched in the technique of the bird designs on the the vessels, has been discovered. A copper stamp seal has also been found at Nal<sup>9</sup>.

Different types of beads have been unearthed in the excavations of the cemetery at Nal. Among these are lapis lazuli beads which were also found at Pandi Wahi in Sind. This stone was too costly and of much value in the orient. In ancient times Indians used to obtain it from Persia, or Badakshan in Afghanistan<sup>10</sup>.

1. Piggott, *Prehistoric India*, p. 95.

2. *Ibid.*

3. *Ibid.*

4. *Ibid.*

5. *Ibid.*, p. 90.

6. De Cardi, "British Expeditions to Kalat, 1948 and 1951", *Pakistan Archaeology*, I, 1964, & 1965 quoted in Agrawal, *The Copper Bronze Age in India*, p. 16.

7. Agrawal, *Ibid.*, p. 66.

8. *Ibid.*

9. Piggott, *Prehistoric India*, p. 91.

10. *Ibid.*, p. 92.

Historical evidence indicates that the people of Amri-Nal culture-complex might have had commercial contacts with the Persians and Afghans, and this relationship brought about some closeness in their custom and rituals. A complete burial at Nal presents the look of a body lying on the left side, head to the east, and face to the south, which is similar to the tombs of pre-Dynastic Egypt where the common lining of mud brick around the edge is generally used and the bodies are usually placed on the left side<sup>1</sup>.

Recent excavations at Bala Kot<sup>2</sup>, some sixty Km. north-west of Karachi, have yielded a large number of Nal pot-sherds along with the Kalat pottery and the Amri Ware, in the pre-Harappan levels, a fact which establishes the movement of southern Baluchi people in Sind, particularly in the Las Bela region, at a very early date, round about 3000 B.C. or a little earlier. Amri-Nal-Anjira complex, it may be made clear, appears in this region as a single unit--the product of the process of polarization and Indianization.

### Kulli Culture

Kulli culture is the third distinctive culture of the buff ware group with Kulli as the type site in the southern foot-hills of the Baluchi mountains in Kolwa region. Sometimes, the name of Mehi<sup>3</sup>, the site of a cognate culture located further to the north-east in the valley of the Mashkai, is also associated with this culture, and the two sites together provide the nomenclature 'Kulli-Mehi'. Quite a large number of sites of this complex have been discovered in south Baluchistan, most of them are located in the Kolwa district<sup>4</sup>. As a result of the excavations conducted by Stein<sup>5</sup>, the sites of Kulli and Mehi have yielded several objects which give important evidence concerning contacts between India and Western Asia.

Excavations have brought to light a number of earthen vessels. The potters of Kulli culture employed a pale red or whitish slip as the base for painted designs executed in black pigment. However, sometimes the use of red in broad horizontal

1. Hargreaves, *Excavations in Baluchistan*, MASI, No. 35, p. 26, Pl. XIIa.
2. Dales, *op. cit.* Also, Raikes, "Archaeological Explorations in Southern Jhalawan and Las Bela", *Origini* II, 1968, pp. 103-171.
3. One can obtain some knowledge about cremation burials from Mehi cemetery (Wheeler, *Indus Civilization*, p. 14). Then, at both the sites houses were built of plaster, stone and bricks. Stone ranging from rough to the carefully squared shale and sandstone ashlar blocks, arranged in decorative courses were used as the building materials. Flagged paving, stone walls, windowless and doorless rooms, staircases have been found in the houses of Kulli Culture. Piggott, *Prehistoric India*, pp. 97-98.
4. Piggott, *Prehistoric India*, p. 96; Wheeler, *Indus Civilization*, p. 13.
5. Stein, *An Archaeological Tour in Gedrosia*, MASI, 43, p. 104 ff.

bands has also been attested. Small proportion of hard fine pale grey sherd with burnished surface can also be noticed in the pottery repertoire.

Typology of the Kulli pottery includes dish-on-stand, globular beakers, small flat-based flasks, tall bottle-shaped vases, small flat dishes, straight-sided cups and jars, large storage jars, perforated vessels, etc. The painted motifs include small caprids, plants, dots and circles, and comb patterns which bear a close resemblance to the design on the "Scarlet Ware" of the Diyala region near Baghdad in Early Dynastic times<sup>1</sup>. There are two sites in Bampur region of Persian Makran and in Sistan, which help us in assessing the similarity between the painted wares of Fars and Baluchistan. The vessels bearing motifs of plants, raised wavy bands, rows of bucks or ibexes and large animals, discovered from the Bampur region of Persian Makran and from Sistan, are similar to those on the pots of the Kulli Ware<sup>2</sup>. The motif of landscape with animals painted on Kulli pots (Fig. 25) recalls its parallels on pots found at Susa (Fig. 26), Khuzistan and in Diyala region (Fig. 26) near Baghdad<sup>3</sup>. The fauna is small figures, usually of birds, in the spaces between their legs or above their heads, can be seen in the standing pose in a landscape of spiky trees on those vessels. The animals may be identified as bulls, black bucks and goats. Long files of goat or ibex figures have been depicted in the short-hand of the Kulli style on the vessels found at Susa<sup>4</sup>.

A war-chariot, drawn by an ox, in the typical Kulli style 'with the characteristic exaggerated circular rendering of the eye' has been painted on a pot Scarlet Ware of Susa<sup>5</sup>. It appears that both the groups were inspired by the common feelings, common spirit and, to some extent, common techniques also.

A single fragment of a peculiar class of Kulli pottery from Shahi Tump, made of hard fabric and decorated with zig-zags and channelled incisions in straight lines, bears resemblance with the specimens found in the southern region of Persian and Sistan<sup>6</sup>. Kulli pottery<sup>7</sup> also closely resembles a class of the pottery found at Umm-an-Nar island<sup>8</sup> in the Sheikdom of Abu-Dhabi, on the Persian Gulf coast of the Oman Peninsula. They present similar forms and the same type of decorations. These similarities provide a new clue to the contacts between India and the Persian Gulf region (Pl. II, a and b).

1. Wheeler, *Indus Civilization*, p. 14.
2. Gordon, *Prehistoric Background of Indian Culture*, p. 48.
3. Agrawal, *The Copper Bronze Age in India*, p. 18.
4. Piggott, *Prehistoric India*, pp. 115-116.
5. *Ibid.*, p. 116.
6. *Ibid.*, p. 104.
7. Piggott, "The Chronology of Prehistoric North-West India", *AI*, I, 1946, p. 8.
8. Thorvildsen, "Burial Cairns on Umm-an-Nar", *Kuml*, 1962, p. 218. P. V. Glob and T.G. Bibby conducted the excavations in this island with the Fifth Danish Bahrain Archaeological Expedition in 1958.

Certain peculiar types of pottery with a high shoulder and plain bright red slip discovered at Khurab cemetery, near Bampur, (Fig. 27) recall similar types found at Mehi<sup>1</sup>. It can be presumed that the inhabitants of both the regions were familiar with each other and due to their cultural and commercial contacts the idea in preparing decorative patterns were interchanged.

A group of stone vessels, probably meant for keeping unguents, has been recovered from Mehi. The vessels are square or circular in form and are divided into four compartments. They are incised and have hatched triangles. Some of them are unfinished. Similar types of vessels have been discovered at Mohenjo-daro, at sites near Bampur, in Sistan, as well as in Mesopotamia and Syria<sup>2</sup>.

A small stone cup with elaborately carved ornamentation has been found at Shub-ad's grave at Ur and its parallels have been reported from the Dasht river sites in Makran<sup>3</sup>. Excavations at Kish, Susa and Mohenjo-daro have yielded the cups carved to imitate basketry<sup>4</sup> (Fig. 28). Hut with doors and windows have been represented on some vessels designated as 'House-urns'. These house-urns were commonly used in Sistan, at Khurab (Fig. 28) (Persian Makran), Mari (Fig. 28), Khafajah (Fig. 29), Lagash, Adab and Susa<sup>5</sup> (Fig. 28.9 to 13). Closely related to it is a class of Incised Grey Ware found at Tepe Yahya (Pl. III, a).

The discovery of these house-urns at the above mentioned places proves that the people of the two regions were closely connected, in all probability, by commercial intercourse. According to Piggott<sup>6</sup>, Makran was the commercial centre. Kulli and Mehi were the integral parts of a creative complex of commercial contacts. There were two possible ways for the trade, either the Sumerian ships came to this place for these pots and purchased them in exchange for precious stones or the Indians themselves took these to Sumerian cities for sale. Lamberg-Karlovsky<sup>7</sup> favours only 'indirect trade' between India and Mesopotamia. According to him, the quantum of trade was limited and sites like Tepe Yahya played the role of 'central place of exchange'. During Caspers<sup>8</sup>, however, feels that the Indian merchants themselves traded with Mesopotamia. The evidence, however, is quite

1. Piggott, *Prehistoric India*, p. 105.
2. Wheeler, *Indus Civilization*, pp. 14-15; Durrani, "Stone Vases as evidence of connection between Mesopotamia and Indus Valley", *AP*, No. 1, 1964, pp. 51-96; Khan, *Indus Valley and Early Iran*, pp. 27-30.
3. Piggott, *Prehistoric India*, p. 116.
4. Wheeler, *Indus Civilization*, p. 15.
5. Marshall, *op. cit.*, p. CXXXI ; Mackay, in Henry Field's article, "Steatite Vases from Kish", *Antiquity*, VII, p. 84 ; Piggott, *Prehistoric India*, p. 177 ; Wheeler *Indus Civilization*, p. 15, Gordon, *The Prehistoric Background of Indian Culture*, pp. 48-49.
6. Piggott, *Prehistoric India*, p. 117.
7. Lamberg-Karlovsky, *op. cit.*
8. During Caspers, *op. cit.*

significant, from the point of view of Indo-West Asian contacts, whatever might have been the mechanism of trade.

In Sumer a very significant pot of the Scarlet Ware has been discovered. On this vessel a scene of bull-worship has been depicted. The form of the bull is typically Indian<sup>1</sup>, although not as realistic as it is in the Indus Valley. The depiction of the bull on a steatite cup of Sumerian style from Tell Agrab in the Diyala region<sup>2</sup>, is also in typical Indian style. Perhaps it was prepared by some Sumerian artist who was well-familiar with the Indian bulls or their depictions. The eyes of a bull, represented on a cylinder seal from Ur, show close similarity with those of the bull figures on the Kulli Ware and was probably carved by some Indian artist<sup>3</sup>. Clay figurines of humped bull, and some pots, discovered at Susa are similar to a number of figurines and pots from Kulli<sup>4</sup>. A mirror found at Mehi can be compared with that found at Susa in Elam<sup>5</sup>. It may also be pointed out that the humped bull in its depiction on seals, cups, and pots of Scarlet Ware, is typically Indian. This, according to Piggott, suggests the presence of Indian merchants in the cities of Elam and Sumer, although the 'actual presence of people' theory, as said earlier, has not been subscribed by authors like Lamberg-Karlovsky.

According to Allchin, "the distinctive decoration on the Kulli pottery clearly emphasizes its position as a link between southern Iraq, Iran and the lower Indus"<sup>6</sup>. Lamberg-Karlovsky has also hinted at it<sup>7</sup>. Female figurines<sup>8</sup> (Fig. 16.20) related to Mother-goddess cult have been unearthed at Kulli. The cult of the Mother-goddess was prevalent in the whole of Western Asia<sup>9</sup>, including Central Asia and it is possible that the concept underlying this cult travelled from Central Asia to India (although the form of the figurines assumed different forms in different regions). One particular form in which the head is stylized and the legs joined or not shown at all, instead a triangular base is given to the figurine, has been found in South Turkmenia, Gumla Valley and Ravi basin (Pl. IV a,b,c, respectively).

On such pieces of information, some idea of inter-communication between India and West Asia in the early chalcolithic period can be formed. Probably, Baluchi people used two routes to reach the countries lying to the west of their land,

1. Piggott, *Prehistoric India*, p. 117.
2. *Ibid.*
3. *Ibid.*
4. *Ibid.*, pp. 117-118.
5. *Ibid.*, pp. 112-113.
6. Allchin and Allchin, *op. cit.*, p. 112.
7. Lamberg-Karlovsky, *The Proto-Elmite Settlement at Tepe Yahya*, Iran 1971, p. 94, also Richard Meadow, *et al.*, "Problems in the Culture History of Baluchistan and Southern-eastern Iran", cyclostyled copy.
8. Gajjar, *op. cit.*, p. 10, fig. 36.
9. James, *The Cult of the Mother-goddess*, 1959, p. 11.

the northern and the southern. As indicated earlier, the northern route appears to have connected northern Baluchistan with northern Iran through southern Afghanistan, while the southern route connected southern Baluchistan with Mesopotamia through Persian Makran. But are the parallels quoted above any proof of definite inter-relationship between India and West/Central Asia? According to Mughal, Fairservis, Piggott, Gordon and a few others, most of the prehistoric Baluchi cultures seem to have been derived, or at least inspired by, from the pre-existing or contemporary cultures of West Asia and Central Asia particularly, Iranian and Turkmenian. There is no doubt that the Red Ware was popular in the area of south-east Caspian Sea, including Hissar, Sialk and Chasmah Ali with an extension into the Zhob Valley of Baluchistan and Harappan sites, while the Buff Ware was popular in Mesopotamia, south-eastern Iran (from Tepe Gawra to Tal-i-Bakun), Sistan, Persian Makran and central and southern Baluchistan (Fig. 27). However, as De Cardi has pointed out, in regions like Kalat we do get both the wares. As a matter of fact, the zonal concept of the Red Ware and Buff Ware has now only a qualified validity based on statistics, since we do get sites in both the zones where both the wares are found, although on the sites of the essentially Red Ware, Buff Ware pots are very few, and vice-versa.

In any case, the evidence quoted here both from the older excavations conducted at Rana Ghundai, Kulli, Mehi, Nal and other places, and recent excavations carried out at Shahr-i-Sokhta, Damb Sadaat, Kile-Ghul-Mohammad, Gumla, Amri, Tepe Yahaya, Mundigak and several other places clearly shows that the beginning of the chalcolithic culture in the western most region of ancient India was not only initiated by the peoples of West Asian and Central Asian origin, or at least those brought up in the West Asian and Central Asian cultural traditions, particularly north Iranian, south Turkmenian, but also effectively sustained for more than a millennium by a constant, howsoever limited, rapport that they maintained with the important cultural centres in north-west India. Although the evidence, by and large, is fragmentary, some of it is even of extremely doubtful nature<sup>1</sup>, some are probably just the similarities, the examples of only parallel and independent evolutions, yet the fact remains that it was the cultural and commercial contact of India with West Asia which was directly responsible for the change of cultures in Baluchistan from the neolithic stage to the chalcolithic stage since the Indian mainland did not have the chalcolithic complex prior to Baluchi chalcolithic cultures.

1. Sankalia, *Prehistoric and Protohistoric India and Pakistan* (Revised Edition, 1974), pp. 317-337. Also, Mughal, *The Early Harappan Period in Greater Indus Valley* (unpublished Ph. D. Thesis, 1968).

### CHAPTER III

## THE PERIOD OF HARAPPA CULTURE

Excavations of the Harappan sites have contributed a new chapter to Indian history by bringing to light a civilization roughly datable to the second half of the third and first half of the second millennium B.C.<sup>1</sup> In the absence of the deciphered records, for the interpretation of the material we have to rely on archaeological evidence. In the course of explorations and excavations during the last fifty years over 200 Harappan sites have been located<sup>2</sup>. Some of the major sites excavated include Harappa<sup>3</sup> (Distt. Montgomery), Mohenjo-daro<sup>4</sup> (Distt. Larkana), Chanhu-daro<sup>5</sup>, Rupar<sup>6</sup> (Distt. Rupar) Rangpur<sup>7</sup> (Distt. Kathiawad), Lothal<sup>8</sup> (Distt. Ahmedabad), Kalibangan<sup>9</sup> (Distt. Ganganagar), Alamgirpur<sup>10</sup> (Distt. Meerut), Surkotada<sup>11</sup>

1. Marshall suggested a date 3250—2750 B.C. for the occupation of the Harappan Civilization. (Marshall, *Mohenjo-daro and Indus Valley Civilization I*, p. 104). Wheeler estimated it within 2500—1500 B.C. (*Indus Civilization*, p. 95). But a time bracket of 2300—1750 B.C. has been suggested by Agrawal on the basis of radiocarbon dating (*Current Science* Vol. 143, No. 3609, pp. 950-52). By and large, scholars place the Harappan culture between 2500 and 1700 B.C.
2. Pande and Ramchandran, *A Bibliography on Harappan Culture*, 1971; Rao, *Lothal and Indus Civilization*, pp. 195-202 Appendix I. Also Mughal, *Present State of Research on the Indus Valley Civilization*.
3. In 1921 Rai Bahadur Daya Ram Sahni started systematic excavations at Harappa and the work was continued, by M.S. Vats in 1923-24 (Vats, *Excavations at Harappa*, 2 Vols.).
4. Marshall, *op. cit.*; Mackay, *Further Excavation at Mohenjo-daro*.
5. Mackay, *Chanhu-daro Excavations*, 1935-36.
6. *IAR*, 1953-54.
7. *IAR*, 1953-54, 1954-55; Rao, "Excavations at Rangpur and other explorations in Gujarat", *AI*, No. 18-19, 1962-63.
8. *IAR*, 1954-55, 1955-56, 1956-57, 1957-58, 1958-59; Rao, *Lothal and Indus Civilization*.
9. *IAR*, 1960-61, 1969-62, 1961-62, 1963-64, 1964-65, 1967-68; Lal and Thapar, "Excavation at Kalibangan : New Light on the Indus Civilization", *Cultural Forum*, No. 34 (1967), pp. 78-88.
10. *IAR*, 1958-59, pp. 50-55.
11. Joshi, "Exploration in Kutch and excavation at Surkotada and New Light on Harappan migration", *Jr. of the Oriental Institute, Baroda*, Vol. XXII, Nos. 1-2 (1972), pp. 98-142.

(Distt. Kutch), Balakot<sup>1</sup> (Distt. Las Bela), Allah Dino<sup>2</sup> (near Karachi). This civilization extended, in the present state of our knowledge, towards the east up to Alamgirpur in Uttar Pradesh, towards the west up to Dabarkot and Sutkagen-dor in Baluchistan, towards the south up to Bhagatraw in Gujarat and towards the north up to Rupar in the Punjab and Gumla Valley. These excavations and explorations have proved that the area, covered by the Indus Valley culture, was earlier estimated as  $1200 \times 700 = 840,000$  square miles is larger than the area of the ancient Mesopotamian or Egyptian Civilization<sup>3</sup> (Fig. 30).

### West Asia

For a long time it was believed that India's Contact with other countries began with the arrival of the Vedic Aryans. But the researches in Harappa culture, which is generally regarded as pre-Vedic, have now revealed that the Harappans had commercial contacts with the peoples of contemporary Sumer, Elam and Iran. Prof. Childe goes to the extent of asserting that India has contributed much to the contemporary civilizations of the Middle East<sup>4</sup> while Lamberg-Karlovsky would believe that the contacts between India and West Asia were peripheral and extremely limited<sup>5</sup>.

The complete absence of deciphered literary records for the Harappa period (in spite of several claims)<sup>6</sup> makes it rather difficult for us to enter upon a thorough inquiry of the trade routes with certainty. However, India's contact with West Asia seems to have been both by land and sea routes<sup>7</sup> as evidenced from the discovery of terracotta bullock carts<sup>8</sup> (Pl. V a), and representations of ships on a stone seal<sup>9</sup> (Pl. V b), and on a terracotta amulet (Pl. V c), besides terracotta boats from Lothal (Pl. V d)<sup>10</sup>. There were two main trade-routes by which the Indus people seem to have established trade relations with the valley of the Tigris and Euphrates. "The northern route links north Iran and Oxus region with Kabul and the Central reaches of the Indus; the southern route links Central and South Iran alternatively

1. Dales, "Excavations at Balakot, Pakistan, 1973", *Journal of Field Archaeology*, Vol. 1, No. 1/2, 1974, pp. 1-22.
2. Personal communications from W. Fairservis, Jr., the excavator, to Dr. S.P. Gupta.
3. Lal and Thapar, "Excavations at Kalibangan: New Light on the Indus Civilization", *Cultural Forum*, No. 34, 1967, p. 78.
4. Childe, *New Light on the Most Ancient East*, p. 212.
5. Lamberg-Karlovsky, "Trade Mechanisms in Indus-Mesopotamian Interrelations", *Jr. of the American Oriental Society*, Vol. 92, No. 2, April—June, 1972, pp. 222-229.
6. Lal, "Some Observations on Harappan Script", *ICWTC*, pp. 189-202.
7. Rao, "Shipping in Ancient India" *ICWTC*., p. 99.
8. Allchin and Allchin, *op. cit.* Pl. 18C.
9. *Ibid.*, Pl. 12 A & B.
10. Rao, *op. cit.*; *Lothal and Indus Civilization*, P. XXXV B.

with Kandhar, north Baluchistan and the more southerly regions of the Indus or with Makran and the Indus delta<sup>1</sup>. At Lothal, we have definite evidence of maritime activities of the Harappans in the form of dockyard (Pl. VI). The sea-route started from the Gulf of Cambay and then passed along the coast of the Arabian sea, entered into the Persian Gulf and finally reached the mouth of Euphrates, near Ur<sup>2</sup>.

The great river valleys, because of favourable ecological conditions have often proved to be the 'areas of attraction'; and according to Spate<sup>3</sup>, the important city oriented civilization have flourished in the river valleys : the Harappan in the Indus valley, Egyptian in the valley of the Nile, and Mesopotamian in the valleys of the Tigris and the Euphrates. It may, however, be pointed out that since these rivers had different geo-physical sources as also the land through which they flowed were vitally different their behavioural pattern differed considerably and, therefore, the cultures which they gave birth to also assumed unique characteristics.

A comparative study of the articles of daily use found at different sites of the ancient Bronze Age civilizations, however, reveals that there are some parallels in some cases even identity, in the cultural milieu of Mesopotamia, Elam, Iran, Central Asia and India. Earlier writers have taken pains to indicate the instances of Harappan parallelism even in those far off countries with which there is hardly any undisputed proof of relationship, e.g., Egypt and Crete. There has been a general opinion amongst the older writers that all the great Bronze Age cultures of the 3rd-2nd millennia B.C. shared something or the other by way of trade—a proposition which has now been challenged and meticulously scrutinized<sup>4</sup>. In any case, the Wheelerian dictum that 'ideas have wings' also goes in line with the older theories<sup>5</sup>. Whatever this modern dictum may try to suggest, one thing is certain that there are at least a few fragments of evidence which fully testify connections between India and West Asia; but at the present state of our knowledge it is difficult to work out the exact mechanism of contact. Working within these limitations we have tried to collect the scattered data to judge the nature and quantum of India's contacts with West Asia during the third-second millennia B.C.

1. Wheeler, *Early India and Pakistan*, p. 16.
2. Rao, "Shipping in Ancient India", *ICWTC*, pp. 83-107; Mallowan, "The Mechanism of Ancient Trade in Western Asia", *Iran*, Vol. III (1955), pp. 1-9. During Caspers, "New Archaeological Evidence for maritime trade in the Persian Gulf during proto-literate Period", *East and West*, Vol. 21 (1-2) 1971, pp. 21-44.
3. Spate, *India and Pakistan general—A Regional Geography*, 1954, pp. 352-61; Subbarao, *Personality of India*, 1956, pp. 4-11.
4. Mughal, *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan*, p. 359 ff.
5. *Ibid.*

The similarities worked out, particularly in socio-cultural elements, may be seen in the gradational organization of the society in cities, domestic architecture, pottery, means of recreation, use of certain types of beads and other items of ornaments, knowledge and use of lapis-lazuli and faience, use of stone along with copper and bronze to prepare tools and weapons, vessels, etc.

According to Wheeler, the citizens of the Indus Valley probably learnt the *idea* of town-planning from adult Mesopotamia<sup>1</sup>; but there is hardly any archaeological evidence to prove it, as pointed out by Lamberg-Karlovsky<sup>2</sup>. The method of using bricks in the construction of walls at Mohenjo-daro has, however, some distant parallels in the masonry work at Ur and Warka<sup>3</sup>. Interestingly enough, some of the bricks resemble a particular type of the offering-trays of ancient Egypt<sup>4</sup>. According to Woolley, certain houses of the Third Dynasty of Ur are similar to the houses of Mohenjo-daro<sup>5</sup> in planning and execution. The following technical parallels can be seen in the houses of the two regions. In the Harappan houses, the roof of the buildings, in all probability, was flat. Pieces of mud bearing impression of reed matting, found at Mohenjo-daro and pieces of a decomposed wooden beam, 2.35 mt. long, found lying on the floor of a house at Lothal<sup>6</sup> are significant. These mud-impressions indicate that in preparing the matting the complete or true reed stems were laid side by side. The same kind of roof-matting has been discovered at the ancient sites of Sumer<sup>7</sup>. Further, the form and technical devices in the corbelled arches in the structural complexes of Tell Asmar. Mohenjo-daro and Lothal are similar also<sup>8</sup>. The houses of Harappan towns generally contained privies, bath-rooms and drains which also occur in the houses of Mesopotamia. The privies of the houses discovered in Mohenjo-daro are similar to the privies unearthed by Frankfort in an Akkadian palace at Tell Asmar<sup>9</sup>.

The unusual arrangements of bath-rooms and drains in an Akkadian building at Tell Asmar suggests Harappan impact because this arrangement was common in the Harappan<sup>10</sup> towns. The use of wedge shaped bricks in circular wells stone or

1. Wheeler, *Early India and Pakistan*, p. 108; The views have only a limited validity.
2. Lamberg-Karlovsky, *op. cit.*
3. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 649. Vol. II, Pls. XXII 2, XXIII 7, XXXIX 8,
4. *Ibid.*, p. 428, Vol. II, pl. CVIII, No. 15.
5. Marshall, *op. cit.*, Vol. I, p. 106.
6. Rao, *op. cit.*, p. 77.
7. Frankfort, *Tell Asmar and Khasaje*, 1930-33, Orient. Inst. University, Chicago, p. 91.
8. Frankfort, "The Indus Civilization and the Near East", *ABIA*, 1932, p. 6.
9. Frankfort, *Tell Asmar, Khasaje and Khorsabad II*, p. 36, fig. 23 ; Wheeler, *Civilizations of the Indus Valley and Beyond*, pp. 19-20; Rao, *op. cit.*, p. 77.
10. Frankfort, *Tell Asmar, Khasaje and Khorsabad II*, p. 36. Orient Institute of Chicago Communications, No. 16, 1933, p. 55; Piggott, "The Chronology of Prehistoric North West India", *AI*, Vol. I, 1946, p. 21.

baked clay lattice-screens for windows, pottery drains, arranged vertically along the wall, horizontal drains of baked bricks, etc., were common to the Indus and Sumer architecture<sup>1</sup>. The gutters of Lothal and Mohenjo-daro<sup>2</sup> somewhat resemble those discovered at Jamdat Nasr (Mesopotamia)<sup>3</sup>. We come across a very elaborate and somewhat similar drainage system in Tell Asmar, Lothal, and Mohenjo-daro. The drain pipes, found at Mohenjo-daro<sup>4</sup>, have their parallels at Ur<sup>5</sup> and Eshnunna<sup>6</sup> in Mesopotamia. But the drain pipes of Mohenjo-daro are superior in design and construction than their counterparts just referred to. These similarities might not indicate the actual migration of people in large number from one region to another but they may very well suggest the sharing of certain ideas through incidental movement of people for purpose of trade or otherwise.

There is some family likeness between the Harappan pottery and some of the Mesopotamian, Soviet Central Asian and north-east Iranian pottery, particularly in types like dish-on-stand, perforated vessel, feeding cup, bowl, vessel with knob, jar, beaker, etc.<sup>7</sup> and in painted designs certain geometric forms and faunal and floral representations. A detailed study of the pottery by Mrs. Manchanda has shown that "The Harappan pottery belongs to the category of monolithic black-on-red ware characterised by shapes and burnished red slip. In the careful levigation thoughtful tempering with sand or lime and in beautiful finish turned on fast wheel, it resembles, above all, the pottery of the Jamdat-Nasr period. Not merely in appearance but in typology also the Harappan pottery closely follows the western proto-type. Out of thirtyone types, about fifteen, for example, beakers, footed or stemmed bowls, footed cups, dishes, basins, pans, ledge-necked jars, carinated squat jars, pedestalled vases, bowl-like lids, jar-stands and above all 'S' shaped ritualistic goblets and wide shouldered jar, can be traced back to the Jamdat-Nasr period. The resemblance in the basic variants of these types is nothing short of complete identity. Ribbing, and detaching the vessel from the wheel by a cord can again be taken to the Jamdat Nasr or protoliterate period of West Asia"<sup>8</sup>. Potter's kilns,

1. Frankfort, "Indus Civilization and the Near East", *ABIA*, 1932, p. 6.
2. Mackay, *op. cit.*, Vol. I, p. 425, Vol. II, pl. CVIII, no. 18, 26, 29.
3. Mackay, "Report on Excavations at Jemdet Nasr (Iraq)," *Anthropology Memoirs*, Field Museum, Chicago, Vol. I, no. 3, Pl. LXXVI, fig. 9.
4. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p I. p. 426, Vol. II, Pl. CVIII, 30; CX, 35.
5. *Antiquaries Journal*, Vol. VI, Pl. LIX.
6. Woolley, *The Excavations at Ur*, 1925-26; Frankfort, *ILN*, July 15, 1933, p. 100, fig. 138.
7. Khan, *The Indus Valley and Early Iran*, pp. 31-32, 44-46; Lal and Thapar, "Excavations at Kalibangan", *IAR* from 1961-62 to 1967-68.
8. Manchanda, *A Study of Harappan Pottery*, p. 373; also see Starr, *Indus Valley Painted Pottery*; Rao *op. cit.*; also "Excavation at Rangpur and other Explorations in Gujarat", *AI*, No. 18-19, pp. 5-207.

found in the latest phase of Mohenjo-daro recall the kilns discovered at Susa and some other Mesopotamian sites of the Early Dynastic period<sup>1</sup>.

The use of the grey ware in varying quantities has been attested in several Mesopotamian and Iranian sites. Grey ware is met with even in Western Baluchistan and Sistan, often along with the light coloured wares resembling those from Persia and Mesopotamia<sup>2</sup>. Then comes the red ware. This pottery, often painted in black pigment and unearthed at Mohenjo-daro, Harappa, Kalibangan, Lothal and other Indus Valley Culture sites has some similarity with the pottery found at Jamdat Nasr in Sumer and at Tepe Mousian in Susa (Iran) in clay, designs and technique of painting<sup>3</sup>. These potteries are also similar to certain wares of northern and southern Baluchistan, which seem to have been derived from Iran as Fairservis has tried to work out<sup>4</sup>. To some extent it establishes the Irano-Baluchi impact on the Indus Valley Culture<sup>5</sup>. Certain plain red ware as well as buff ware pots, having Harappan affinities, have also been found in the cemetery at Khurab in Persian Makran<sup>6</sup>. Frankfort retrieved some pot-sherds at Tell Asmar with surface decorated with small knobs of clay. This type of pottery does not seem to have been found at many sites in Mesopotamia but has been discovered at Harappa, Mohenjo-daro<sup>7</sup> and other places in the Indus region, although always only in a restricted quantity.

The painted pottery of the Indus culture also shows some striking similarities with those from Iran and Mesopotamia particularly in the Diyala region. Reserved Slip Ware belonging to the Sargonid period has been found in small quantities at several Indus sites<sup>8</sup> e.g., at Mohenjo-daro, Harappa, Surkotada, Lothal and Kalibangan. At the end of Jamdat Nasr period at Kish, and Nineveh also we get the pottery of the same type<sup>9</sup>. At Ur and Mohenjo-daro this had a light slip, brought out on a darker body. At Kish, however, the slip was dark, removed from a lighter body. Mackay and following him Rao, Joshi and others state that

1. Piggott, *Prehistoric India*, p. 191; Mackay, *op. cit.*, Vol. I, p. 172, Vol. 2, Pl. XXXV 9.
2. Marshall, *op. cit.*, Vol. I, p. 97; Piggott, *op. cit.*, p. 75.
3. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. XXVIII, 1947, p. 166.
4. Fairservis, *The Roots of Ancient India*, 1971, pp. 219-220 ff. Also, Allchin and Allchin, *Birth of Indian Civilization*, pp. 126 and 322.
5. Sankalia, *Prehistory & Protohistory of Early India and Pakistan*, p. 180.
6. Piggott, *op. cit.*, pp. 194, 207.
7. Mackay, *Early Indus Civilization*, p. 47; Dixit, *Prehistoric Civilization of the Indus Valley*, p. 52; Manchanda, *op. cit.*, pp. 124-125.
8. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 184, pl. LXVII, 3-4; Joshi, *op. cit.*, p. 127-29; Rao, *op. cit.*, p. 164; *IAR*, 1961-62, p. 43.
9. Woolley, "Excavations at Ur 1929-30", *Antiquaries Journal*, Vol. X. pp. 231-39; *Development of Sumerian Art*, Pl. II, pp. 50-51.

the Reserved Slip Ware pots, found at the Indus sites were imports from Mesopotamia<sup>1</sup>.

Two colours are normally used on Harappan pottery—a warm, very often purplish black and deep plum red, somewhat identical with the colours used in Akkad<sup>2</sup>. The depiction of human figures on painted pottery of either kind is rare in the Indus Culture but rather common in Susa, Sumer and also in Pre-Dynastic Egypt. Representation of animal figures on pottery is, however, more common than that of human figures. Ibex is a common motif on the Iranian and Baluchi pottery<sup>3</sup>. This animal was also found painted on the wares of Elam, Sumer and Egypt<sup>4</sup>. It is sometimes also found depicted on the Harappan pots. The depiction of human figures and ibex on Harappan pottery might be indicative of the introduction of the West Asian motifs in the Indus-Valley, although only to a very restricted degree. A certain motif on Mohenjo-daro pottery resembles rugous horns<sup>5</sup>. The same can be seen on a painted dish from Samarra, associated with an animal of the same type; possibly the idea of representing the cast horns was there also.

The bird motif was rarely used in the Indus Valley and Mesopotamia but was quite common in Elam and Egypt<sup>6</sup>. Representation of fish on pottery is a frequent device of the Elam pottery which is also met with on the Nal Ware<sup>7</sup>. In the Harappan context the representation of fish is rare although fish-scale pattern is quite common in both Harappan (Fig. 31.6) and Mesopotamian cultures<sup>8</sup> e.g., at Tell Halaf (Fig. 31.7). The sun and comb motifs were quite popular in Mesopotamia and the Indus Valley (Fig. 31.1, 5). The latter is also found on the pottery from Susa I, Tell Halaf (Fig. 31.1), Tepe Gawra (Fig. 31.2) and Sialk<sup>9</sup> (Fig. 31.3). Kidney-shaped motif was frequent in Sumer<sup>10</sup> and Elam and it also occurs on the Indus pottery (Pl. VII a)<sup>11</sup> although only rarely. Raised loop patterns are found on the pottery of Tell-Halaf and Al

1. Mackay, *op. cit.*, Vol. I, p. 185; Rao, *op. cit.*; Joshi. *op. cit.*, pp. 96-100.

2. Childe, *New Light on the Most Ancient East*, p. 226.

3. Dixit, "Some Aspects of Civilization of the Copper Bronze Age in India", *ABORI*, Vol. 31, 1950, p. 179; Joshi, *op. cit.*, p. 123.

4. Mackay, *op. cit.*, Vol. I, p. 217.

5. *Ibid.*, p. 218.

6. Dixit, "Some Aspects of Civilization of the Copper and Bronze Age in India", *ABORI*, Vol. 31, 1950, p. 180. Also, Rao, "Ornithology in Protohistoric Archaeology of India", *Puratattva*, No. 6, pp. 56-58.

7. Mackay, *op. cit.*, Vol. I, p. 219, Pl. LXX, 10.

8. Gajjar, *op. cit.*, p. 21; Manchanda, *op. cit.*, pp. 345-346 also figure facing page 364.

9. Dixit, "Some Aspects of Civilization of the Copper and Bronze Age in India", *ABORI* Vol. 31, 1950, p. 180; Gajjar, *op. cit.*, pp. 19-20; Manchanda, *op. cit.*, pp. 355-360.

10. Woolley and Hall, *Ur Excavations*, Vol. I *Al Ubaid*, pl. XVIII, fig. 1548.

11. Mackay, *op. cit.*, Vol. I, p. 224 (Pl. LXIX, 21); Manchanda, *op. cit.*, p. 359; Rao, *op. cit.*, p. 95.

Ubaid<sup>1</sup> as well as on the Harappan pots. Fragments of a kind of vessel of light green steatite with mat-pattern comes from the early levels of Mohenjo-daro and Surkotada<sup>2</sup>. The same pattern is found on Sumerian vessels of Tell Asmar, Kish and Susa. It is probable that the vessels were imports from Sumer or Elam<sup>3</sup>.

The pattern<sup>4</sup> known as 'file design' has been found on the Harappan pottery (Fig. 31.8) and the Nal pottery (Fig. 31.10). Similar design can be seen on the pottery of Susa I (Fig. 31.11) and Persepolis (Fig. 31.12, 13) from the comparable levels. The pattern appears to be of Iranian origin<sup>5</sup>. Patterns of intersecting-circles were quite common in the Indus Valley sites (Pl. VII a) but rare in Mesopotamia and Iran. It is very likely that this device originated in the Indus basin and was borrowed by others from here.<sup>6</sup> The excavations at Kot Diji have shown that this motif of intersecting circles is likely to have originated in the context of a pre-Harappan complex<sup>7</sup>. Representation of the humped bull was popular in Baluchistan during this period as also in the earlier period<sup>8</sup>. It can also be seen on some carved asphalt vases of early Susa<sup>9</sup>. Sometimes the representation of a geometric tree occurs on the pottery of Mohenjo-daro (Fig. 32.2) and it is significant to note that it is quite common on the Sumerian pottery<sup>10</sup>. Similarly, the four-petalled rosette, used as a border pattern, is fairly common at Mohenjo-daro and Tell Halaf<sup>11</sup>. Further, the trefoil pattern appears on the beads and vessels of Mohenjo-daro (Fig. 32.1) as well as of Mesopotamia<sup>12</sup> e.g., that design occurs on the statues of bull headed men from the Akkadian levels of Warka and Ur.

A type of feeding cup with spout projecting onwards from the base was used by the Harappans. Specimens of similar cups in gold have been found at Ur<sup>13</sup>. A

1. Starr, *Indus Valley Painted Pottery*, fig. 67, p. 49 and fig. 2, p. 27; Manchanda, *op. cit.*, pp. 340-342.
2. Joshi, *op. cit.*, p. 123.
3. Mackay, *op. cit.*, Vol. I, pp. 639-40; Joshi, *op. cit.*
4. Gajjar, *op. cit.*, p. 23.
5. Herzfeld, *Iran in the Ancient East*, pp. 36-37.
6. Dixit, "Some Aspects of Civilization of the Copper and Bronze Age in India", *ABORI*, 31, 1950, p. 123; Mughal, *op. cit.*; Manchanda, *op. cit.*, pp. 347-48; Rao, *op. cit.*, p. 96.
7. Mughal, *op. cit.*, pp. 7-9; Gupta in Manchanda's book, *op. cit.*, p. 395-405, however, feels that the evidence is not absolutely certain.
8. Manchanda, *op. cit.*, pp. 364-372.
9. Marshall, *op. cit.*, Vol. I, p. 324.
10. Mackay, *op. cit.*, Vol. I, p. 226, pl. LVI, 36.
11. Mackay, *Chanhudaro Excavations*, p. 100; Rao, *op. cit.*, p. 96; Joshi, *op. cit.*, p. 123; Manchanda, *op. cit.*, figure facing p. 348.
12. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 227; Rao, *op. cit.*, p. 86. The same design occurs on the shawl of the famous steatite priest from Mohenjo-daro.
13. Mackay, "Further Links between Sind, Sumer and elsewhere", *Antiquity*, Vol. V, 1931, p. 465; Manchanda, *op. cit.*, pp. 95-96.

very characteristic ritualistic vessel connected with harvesting is the ring-kernoi which is typical of the Greek islands as also the mainland from the 4th millennium B.C. to the early centuries of the Christian era. It has also been found at Harappa and Mohenjo-daro, and it is significant to note that similar objects have been sporadically found at Tepe Gawra and in Diyala and they belong to 3200—3000 B.C.<sup>1</sup>

The perforated vessels of the Indus Valley<sup>2</sup> exhibit familiar relationship with those found at Kish<sup>3</sup>, and Tepe Yahya (Pl. III b). Earlier, Mackay had observed that these vessels were used as heaters but subsequently he felt that they served as strainers for curd<sup>4</sup>. Its exact use is, however, still not certain. The handleless dish, such as the shell-vessels, commonly found in Sumer<sup>5</sup> is also known from some of the Harappan sites e.g., Mohenjo-daro and Harappa. A vessel, recovered from the Pre-Sargonid burials in the Sumerian Palace at Kish betrays resemblance to the offering dishes abounding at the Harappan sites<sup>6</sup>. A type of bowl with an internal knob at the base, is closely similar to the ones at Jamdat Nasr in Mesopotamia<sup>7</sup>. Wheeler<sup>8</sup> has rightly observed that the Indus and Sumerian beakers have an apparent similarity between them. Interestingly enough, Gordon Childe thought that certain fragments of vases found at Al'Ubaid were made of Indian soap-stone<sup>9</sup>.

Besides pottery a good number of terracotta figurines from various Indus and West Asian sites show the same phenomenon there were certain concepts which the people in the orient shared, although the art form that they evolved had only some basic resemblance. The mother goddess figurines (Pl. VII b) with their elaborate head-dresses<sup>10</sup> and jewellery, seem particularly to belong to this category of objects. It is well-known that figurines of this type have been found in large numbers in Iran, Elam and Mesopotamia (Fig. 33 d, f, g) Egypt (Fig. 33. a) the Eastern

1. Pande, "Harappan Ring-Kernoi : A Study", *East and West*, (NS) Vol. 21, Nos. 3-4, 1971, p. 318.
2. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, pp. 207-08.
3. Mackay, "A Sumerian Palace and the Cemetery at Kish, Mesopotamia IV", *Anthropology Memoirs*, Vol. I, pl. 54, f. 36.
4. Mackay, "Further Links between Sind, Sumer and Elsewhere", *Antiquity*, Vol. V, p. 465.
5. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 422.
6. Vats, *op. cit.*, Vol. I, p. 227; Manchanda, *op. cit.*, pp. 6-31.
7. Wheeler, *Indus Civilization*, p. 73.
8. *Ibid.*, p. 13.
9. Childe, *New Light on the Most Ancient East*, p. 200 ; Woolley and Hall, *Ur Excavations*, Vol. 1, *Al' Ubaid*, p. 42.
10. Mackay, *op. cit.*, Vol. I, p. 260, pls. LXXII, 4, 6, LXXVII 1, 4, 6. There is a similarity between fan-shaped head-dress of the Harappan female figurines and the head-dress of figures from Adalia in Asia Minor. (*Liv. Ann. Arch. and Anth.* Vol. II, pl. XXVI 4). A figurine, probably from Cyprus similarly bears a general resemblance with the Harappan ones, of course only in so far as the head-dress is concerned.

Mediterranean area, and even in Asia Minor, Syria and Crete (Fig. 33. C)<sup>1</sup>. It may, however, again be emphasized that the similarity is not so much in form as in the underlying concept—the concept of fertility and plenty. Closely related to this concept is that of ‘mother and child’. A terracotta female figurine from Mohenjo-daro, a woman suckling a child closely resembles certain Egyptian figures<sup>2</sup>. In an interesting example, a female figure with the turban like head-dress, has been found at Mohenjo-daro. The way in which the figure has been fashioned, suggests that it represented a dwarf, may be for simple amusement. Figurines, similar to this can be seen in Egypt also<sup>3</sup>.

In the clay anthropomorphic-images from Mohenjo-daro and a few other sites of the Harappa culture, the eyes are represented by pellets of clay. The use of pellets for the representation of eyes was a common practice at Kish<sup>4</sup> and other places. It is, however, only a simple technical device, and hand-modelled examples of terracotta figures from areas wide apart are found using it.

The hair of a little figure, perhaps a male bust, from Mohenjo-daro<sup>5</sup> were coiled, some on the top of the head and some in two coils on one side. It is interesting to note that the Babylonians were also quite familiar with the fashion of the coiled-plaits by the sides of the head<sup>6</sup>. Such fashions were adopted in different countries of the orient for over two millennia.

At Lothal S.R. Rao<sup>7</sup> discovered a few terracotta objects which are extremely significant in the context of Indus-Mesopotamian contacts. A male head with square-cut beard (Pl. VIII a) and a mummy respectively (Pl. VIII b) are absolutely non-Harappan; their exact-parallels are available in the sculptural wealth of Mesopotamia and actual wooden specimens and paintings of Egypt. The male figures with square-cut beard, sharp nose, slit eyes and mouth tally with stone sculptures from Lothal with eyes and mouth indicated by incision and nose formed by pinching has its parallel example from Mohenjo-daro<sup>8</sup>.

1. Marshall, *op. cit.*, Vol. I, p. 339 ; Zimmer, *The Art of Indian Asia*, pp. 21-22 ; Mode, *op. cit.*, p. 1. Also Moti Chandra, ‘‘The Mother Goddess’’, *Bulletin of the Prince of Wales Museum*, (1973), pp. 4-6.
2. *Jour. Eg. Arch.*, Vol. XII, p. 36, pl. VIII.
3. Marshall, *op. cit.*, Vol. I, p. 344 ; Little clay figurines, seated with the hands clasped, round the knees have been discovered from Indus sites. Seated teracotta figures of the Neolithic period, found in northern Greece and another ivory figure from Crete are similar to above mentioned seated figures of the Indus Valley (Mackay, *op. cit.*, Vol. I, p. 265); Evan, *Palace of Minos*, III, pp. 446-47, (pls. LXXIV, 14, 16. figs. 310-11). It may, however, be mentioned that all such examples are only parallelism and not identity.
4. Marshall, *op. cit.*, Vol. I, p. 340.
5. *Ibid.*, p. 343.
6. *Ibid.*
7. Rao, *Lothal and Indus Civilization*, p. 88.
8. *Ibid.*, plates : XXII D, XXII A.

Two Heads (one of steatite and one of limestone) have been discovered at Mohenjo-daro in which the eye-sockets were once filled with inlay-pieces of stone or shell<sup>1</sup>. The use of inlay-pieces for eyes was also a common practice in Mesopotamia and Egypt<sup>2</sup>. Some of the heads found at the Indus sites, resemble those from contemporary Mesopotamia and eastern Syria in hair style, beard and eyes<sup>3</sup>. For example, fine steatite head, with a peculiar type of half-closed eyes<sup>4</sup> from Mohenjo-daro is similar to a figurine unearthed by Woolley in the graves at Ur of the Al'Ubaid II period<sup>5</sup>. However, the limited number of stone sculptures discovered so far (hardly a dozen examples) exhibit only a few technical similarities.

Indus sites, like some of the Baluchi chalcolithic sites, have yielded animal figures in large numbers. They were made from clay, faience, bone, copper, etc. Short-horned bull was a very popular animal in the Indus Valley (Fig. 32.3)<sup>6</sup>. On a carved vessel of bitumen of the second period of Susa<sup>7</sup> an exactly similar representation occurs. According to Ward<sup>8</sup>, Mesopotamian were not familiar with the short-horned bull till about 1000 B.C. Its parallel can be found in Egypt<sup>9</sup>. Recently, a large number of steatite seals have been discovered in the Persian Gulf sites, in Failka, Bahrain, etc., of the 3rd millennium B.C. on which short horned bulls have been depicted over a manger<sup>10</sup>. This is probably, a better example providing evidence in favour of Indus-West Asian contacts. A piece of sculpture (of the period of Gudea about 2400 B.C.) also depicts a humped bull<sup>11</sup>. Humped Oxen have been depicted in a number of ways at Harappa, Mohenjo-daro, Kalibangan, Lothal and several other Indus sites. Interestingly enough, there is a carving of double humped oxen harnessed to a Hittite Wagon<sup>12</sup> on a wall of the temple of Ramesses II at Abydos. This example clearly indicates the presence of humped oxen in Syria before 1000 B.C. Probably, the humped cattle originally belonged to India and from here they were introduced in Elam, Egypt, Anatolia and Syria<sup>13</sup>.

1. Marshall, *op. cit.*, Vol. I, p. 361.
2. *Ibid.*, pl. XCIX, I, pl. XCVIII, 1-4.
3. Wheeler, *Civilization of the Indus Valley and Beyond*, p. 41.
4. Chanda, "Survival of the Prehistoric Civilization of the Indus Valley", *MASI*, No. 41, 1929, p. 25.
5. Woolley, "Excavations at Ur 1929-30" *Antiquaries Journal*, Vol. X, pl. 48, fig. A.D.; see also Woolley & Hall, *Ur Excavation*, Vol. I. *Al'Ubaid*, pl. 48, CIV, 405.
6. Mackay, *op. cit.*, p. 288.
7. *Mem. Del En Perse*, E XIII, pl. XXXIV.
8. Ward, *The Seal Cylinders of Western Asia*, p. 416.
9. Mackay, *op. cit.*, Vol. 1, p. 287.
10. Bibby, "Bahrains oldtidshoevedstad genne 4000 AR", *Kuml*, 1957, p. 143, fig. 13 ; Rao, *op. cit.*, p. 117.
11. King, *A History of Sumer and Akkad*, p. 69, fig. 21.
12. Clarke and Engel, *Ancient Egyptian Masonry*, p. 87. fig. 82.
13. Marshall, *op. cit.*, Vol. III, p. 658; Sewell suggests that it reached India from west through some Mediterranean race. The evidence, however, is slender.

Miniature rams of faience in a seated posture with legs doubled up under them have been noticed at Harappa, Mohenjo-daro and other Indus sites (Fig. 32.4). It is probably significant to note that rams and bulls, made of lapis lazuli, and discovered from the Royal tombs at Ur, were fashioned in the same style<sup>1</sup>. They occur even on the early seals of Babylon and Elam. Ram was popular in ancient Egypt<sup>2</sup> as a sacred animal.

Copper, faience and terracotta representations of domesticated dogs with slightly long faces, upright tails and prick ears have been found at Mohenjo-daro<sup>3</sup>. The dog with a collar and in charge of an attendant is seen in a relief on a pottery plaque from Mesopotamia<sup>4</sup>, now in the British Museum<sup>5</sup>.

Three well-made models of turtle have been unearthed at Mohenjo-daro<sup>6</sup>. It is also depicted on a beautiful pot from Susa, especially on a jar<sup>7</sup>. Similarly, a bronze figure of goat has been discovered at Mohenjo-daro (Fig. 32.5). It has horizontally running spiral horns. The same type of goat is depicted on an early lime-stone plaque from Nippur, and in Egypt it appears to have replaced the rams of Mendes<sup>8</sup>. Although these examples of parallelisms as far off an area as Egypt have no special significance in terms of generic relationship, yet on conceptual level they have some relevance.

### Implements and other objects

Implements made of copper and stone also show that the civilization shared the commonpool of the cultural elements of the orient; for example, stone mace-heads of the Indus type have their parallels in Elam, Mesopotamia, Egypt, Caucasus, etc.<sup>9</sup> Similarly, Indus type querns of light-grey sand-stone have been found at Ur, Susa, Anau, etc.<sup>10</sup>

1. Childe, *New Light on the Most Ancient East*, p. 2.
2. Marshall, *op. cit.*, Vol. I. p. 347.
3. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 286.
4. Mackay, "A Sumerian Palace and the 'A' Cemetery at Kish Mesopotamia II", *Anthropology Memoirs*, Field Museum, Chicago, Vol. I, pl. XXXVI, fig. 6.
5. *Guide to British Museum*, 1922, p. 191. Certain Egyptian representations of that animal including those depicted on the knife handle of Gebelel Arak, are also similar. Of course, this parallelism is, by and large, only on the conceptual plane.
6. Mackay, *op. cit.*, Vol. I, p. 287.
7. *Ibid.*, Similar figures can also be seen in Egypt at a very early date (Petric, *Prehistoric Egypt*, p. 13). In non-Indian context, Egyptian, it sometimes represents Water-God Ea or Enki. (Contenau, *Manuel d' Archæologie Orientale*, p. 349, fig. 258).
8. *Ancient Egypt*, 1923, p. 50, No. 1, quoted by Mackay, *op. cit.*, p. 292.
9. Vats, *Excavations at Harappa*, p. 367; Mackay, *op. cit.*, Vol. I. p. 398; Wheeler, *Indus Civilization*, p. 56.
10. Mackay, *op. cit.*, Vol. I, p. 398.

The Indus tools of copper and bronze also have their parallels in West Asia. There is a close similarity between the drills of Chanhudaro and Ur<sup>1</sup>. Flat axes are, of course, not of any special significance since they are found associated with several cultures throughout the third and second millennia B.C. Yet it may be mentioned that comparable specimens have been found at Sialk III, Hissar Ic, Giyan Vc and Susa I a<sup>2</sup>. A shaft-hole axe found in the upper levels of Mohenjo-daro (Pl. X c) is, however, much more important evidence in favour of Indo-West Asian contacts. Two pottery models of shaft-hole axes from Mohenjo-daro are identical to the clay models of as early as the Al'Ubaid period in Mesopotamia<sup>3</sup>. A bronze axe of similar type is also recorded from the levels of the Jhukar Culture at Chanhudaro<sup>4</sup>. The first shaft-hole axe, found at Mohenjo-daro, according to Piggott, reached India through the invaders from the West, about the middle of the second millennium B.C.<sup>5</sup> An example of axe-adze, a type which never became popular in India before the Iron Age, was discovered in Palestine and the Caucasus<sup>6</sup>. Reinforced blades, i.e., blades with mid-ribs, which are rare at Indus sites, are often found in Syria and Palestine and are dated to 2200—1750 B.C.<sup>7</sup> Leaf-shaped spearheads have been noticed throughout the ancient world<sup>8</sup>. Leaf-shaped spearheads and daggers, found at the Harappan sites of Mohenjo-daro<sup>9</sup>, Harappa<sup>10</sup>, Lothal<sup>11</sup>, Kalibangan<sup>12</sup>, etc., have their parallels in Mesopotamia though in different chronological contexts<sup>13</sup>. Simulating Indus types but with rivet holes for fixing handles are met with in Palestine where they are dated between 1800 and 1500 B.C<sup>14</sup>.

Leaf-shaped knives are peculiar to the Harappa culture. Only one example has been noticed in Hissar III in north-eastern Iran<sup>15</sup>. Another type of knife, with

1. Wheeler, *Indus Civilization*, p. 74.
2. Piggott, *Prehistoric India*, p. 140.
3. Wheeler, *Indus Civilization*, p. 55.
4. Mackay, *Chanhudaro Excavations*, p. 188.
5. Piggott, *Prehistoric India*, p. 198 ; A fragmentary specimen is also available from Lothal, Rao, *op. cit.*, p. 82. Copper shafthole axes were first fabricated by the Sumerian and Elamite coppersmiths; Harappans might have got these from them.
6. Childe, "India and the West before Darius", *Antiquity*, Vol. XVIII, 1939, p. 14 ; Wheeler, *Indus Civilization*, p. 55.
7. Wheeler, *Indus Civilization*, p. 53.
8. *Ibid.*, only one spearhead came from the upper levels of Mohenjo-daro which has a mid-rib.
9. Marshall, *op. cit.*, pp. 497-499.
10. Vats, *op. cit.*, pl. CXXV, figs. 65-77.
11. Rao, *op. cit.*, pl. XIX. F.
12. *IAR*, 1962-63, pl. LXI A.
13. Marshall, *op. cit.*, Vol. I, p. 105.
14. Piggott, *Prehistoric India*, p. 229.
15. Wheeler, *Indus Civilization*, p. 59.

a somewhat triangular section, has also been reported from Mohenjo-daro and Harappa<sup>1</sup>. Another find, suggesting western contacts, is that of copper or bronze flat arrowheads. They resemble the swallow tailed or hollow based flint arrowheads of northern Iran and Egypt<sup>2</sup>. The metallic arrowheads of this form occur in Minoan Crete<sup>3</sup> and early Helladic Greece<sup>4</sup>. The Grecian specimens have two holes at the bottom. Exact counterpart of this occurs at Bagor in Rajasthan in the post-Harappan Chalcolithic context<sup>5</sup>. Hones were rare at Harappan sites but they were very common in Sumer<sup>6</sup>. Lothal has produced several bun-shaped ingots<sup>7</sup>. Similar ingots have been recovered from Mohenjo-daro<sup>8</sup>. It is interesting to note that exactly similar ingots have been reported from Susa. Rao is of the opinion that the Indus-ingots were regularly exported to the West Asian markets<sup>9</sup>.

Stools with the legs shaped to resemble those of oxen were used both by the Mesopotamians and the Indus people. An interesting example of a stool with bull's legs has been depicted on a seal from Mohenjo-daro<sup>10</sup>. Similarly, on a fragment of a monumental stele from Tell Asmar appears a couch with bull's legs. Probably the aristocracy of the Indus Valley and Mesopotamia used such stools and couches on specific occasions<sup>11</sup>.

The presence of small models of beds, with reclining female figure, is quite common in Sumer and Egypt. Significantly enough, two specimens of this type have also come to light from Mohenjo-daro (Fig. 32.6),<sup>12</sup>.

Excavations in the past have also brought to our notice a few other small objects used in everyday life both in the Indus and West Asian cities which show similarities. Thus, a toilet set, reported from the late period of Harappa<sup>13</sup>, has its

1. Mackay, *op. cit.*, Vol. I, p. 463, pls. CXX, 22, 23; A similar knife with a long tang has also been found in Egypt. Similarly certain single-edged cleavers of copper or bronze remind us the Egyptian knives belonging to the VI Dynasty. (Wheeler, *Indus Civilization*, p. 56).
2. Wheeler, *Indus Civilisation*, p. 53.
3. *Ibid.*, p. 55.
4. Gupta, "Arrowheads : its History & Technology", *JBRS*, Vol. XLVII, 1961, pp. 129-140.
5. Misra, "Cultural Significance of three Copper Arrowheads from Rajasthan, India," *JNES*, XXIX, 1970, p. 221-32.
6. Wheeler, *Indus Civilization*, p. 57.
7. Rao, *op. cit.*, p. 80.
8. Mackay, *op. cit.*, Vol. II, pl. CXXXII, No. 37 & 38.
9. Rao, *op. cit.*.
10. Seal No. 222, of Mackay's list of seals.
11. Frankfort, *Iraq Excavations of the Oriental Inst.*, 1932-33, p. 45, fig. 40 ; Mackay, *op. cit.*, pp. 641-42.
12. Marshall, *op. cit.*, Vol. III, pl. XCV, 17; CLIII, 25.
13. *ASIAN*, 1923-24, pl. XIX, 22.

parallel in an object from the graves of the First Dynastic Cemetery at Ur<sup>1</sup>. Similarly, a pottery candle-stick has been reported from Mohenjo-daro and there is evidence to show the prevalence of this particular type of object at Knosses in Crete<sup>2</sup>. This may, however, be a case of coincidence or parallelism only. The use of conical and round spindle-whorls was common to both Mohenjo-daro and Babylon<sup>3</sup>. There was also the frequent use of shell ladles at Mohenjo-daro and at Kish in Mesopotamia<sup>4</sup>.

Seals and sealings of the Indus origin, discovered in the West Asian sites, confirm some sort of commercial contact between India and her western neighbours. Indus seals have come from Tell Asmar, Ur, Kish, Lagash and Susa<sup>5</sup> (Pl. IX a and b; Pl. XI a). As regards the material, of which they were made steatite, faience, copper, lead, clay and calcite were the principal ones and it is significant to note that the same were frequently used in Mesopotamia<sup>6</sup> as well.

Round seals are typical of the Persian Gulf where the island merchants were carrying a flourishing exchange business. They even made special round-seals separately for the Mesopotamian and Indus merchants which could be differentiated on the basis of motifs and the style of knob. Indus seals are usually square, although a few round seals were also made, probably in imitation of the Persian Gulf types. Four such round seals have been discovered at Mohenjo-daro<sup>7</sup>. It is significant to note that five round seals of Indus type were discovered at Ur<sup>8</sup>. A circular seal from Ur with the depiction of a short-horned bull with lowered head, resembles those on the Indus Valley seals. It bears an Indus pictograph<sup>9</sup> and some other signs, probably a scorpion, a fish, a pelican and a round point. The depiction of fish has been found at Mohenjo-daro, but it was more common in Sumer<sup>10</sup>. These five seals bear a bull surmounted by a row of the typical Indus characters. According to Mackay<sup>11</sup>, these seals were imported into Sumer from some Indus site other than Mohenjo-daro and Harappa. Lothal, Surkotada and Bala Kot, are some of the

1. Woolley, "Excavations at Ur", *Antiquaries Journal*, VIII, 1926-27, pp. 1, ff; Piggott, *Prehistoric India*, p. 209, Pusalker feels that in India it was an import from Sumer (Pusalker, "Cultural Interrelation Between India and the Outside World", *CHI*, Vol. I, p. 147).
2. Mackay, *op. cit.*, Vol. I, p. 414, pls. LIV, 12 ; LVI, 35.
3. *Ibid.*, p. 418, pl. CVI, No. 24 ; *Excavations at Babylon*, p. 258.
4. *Ibid.*, p. 421, pl. CV, 21, 26.
5. Gadd, "Seals of Ancient India Style found at Ur", *Proc. Brit. Acad.*, Vol. XVIII, p. 1.
6. Mackay, *op. cit.*, Vol. I, p. 347.
7. *Ibid.*, p. 343, No. 500 ; Marshall, *op. cit.*, seals 309, 383, 478.
8. Gadd, "Seals of Ancient Indian Style found at Ur", *Proc. Brit. Acad.*, Vol. XVIII, pp. 1-22.
9. Mackay, *op. cit.*, Vol. I, pp. 327-28.
10. *Ibid.*,
11. *Ibid.*, p. 343.

important trading coastal towns from where these might have found their way to Mesopotamia. However, another possibility is that these were fabricated in the Persian Gulf sites for the Indus merchandise. In this connection it is extremely significant to note that a circular steatite seal (Pl. X a) from Lothal is actually an import from the Persian Gulf region<sup>1</sup>. This seal is made of steatite of a light grey colour with a creamy surface. At the back, there is a perforated boss covering almost the whole surface and divided by three rows between four circles with a central dot, a style which is typical of the Persian Gulf seals. On the face there are two jumping goat-like animals looking behind and flanking a double-headed dragon. This seal is totally different from the other Indus seals. It bears a great resemblance to the circular seals of steatite, discovered at Barbar<sup>2</sup> (Pl. XI a) and Ras-al-Qula in the island of Bahrain<sup>3</sup> in the Persian Gulf (Pl. XI b and c). Similar circular seals are found in Failka, a small island near Kuwait. They resemble in every aspect, except in size, the 'Persian Gulf Seal' from Lothal. These seals clearly indicate the existence of trade connections between Lothal and Persian Gulf during the Harappan period<sup>4</sup>.

Besides these, five cubical seals of sandy yellow paste have been discovered at Mohenjo-daro<sup>5</sup> and four of them bear parallel lines, crossing one another on two opposite sides. This design was quite popular in the ancient world, for example, in Mesopotamia<sup>6</sup>, Susa<sup>7</sup>, Crete<sup>8</sup>, Egypt<sup>9</sup> and Cappadocia<sup>10</sup>. It might again suggest that the Orient did share a number of common motifs although it is not possible to fully comprehend the mechanism involved in their diffusion.

A calcite cylinder seal from Mohenjo-daro<sup>11</sup> would also link the Indus with Sumer. This seal shows two animals, probably the antelopes, with their bodies parallel to longer axis. A somewhat similar animal is represented on a pot-sherd from Elam<sup>12</sup> and also on a Hittite seal<sup>13</sup>. According to some, Sumer, Elam and to some

1. Rao, "A Persian Gulf Seal from Lothal", *Antiquity*, Vol. XXXVII, No. 146, 1963, p. 96.
2. Mortensen, "On the Date of the temple at Barbar in Bahrain", *Kuml*, 1971, pp. 392-398.
3. Bibby, "The Ancient Indian Style Seals from Bahrain", *Antiquity*, XXXII, 1958, pp. 243-246, pls. XXVI & XXVII.
4. Rao, "A Persian Gulf Seal from Lothal", *Antiquity*, Vol. XXXVII, No. 146, 1963, pp. 96-97.
5. Marshall, *op. cit.*, Vol. II, p. 375.
6. *Ibid.*
7. *Mem Del En Perse*, XVI, pl. I, fig. 1, quoted by Marshall, *op. cit.*, Vol. II, p. 375.
8. Marshall, *op. cit.*, p. 375.
9. Hall, *The Civilization of Greece in the Bronze Age*, pp. 70-71, figs. 73-75.
10. *Catalogue Des Cylindre Muneedu Louvre*, Vol. I, pl. XXXVIII, fig. 6—quoted by Marshall, *op. cit.*, p. 375.
11. Mackay, *op. cit.*, Vol. I, p. 344, seal No. 376.
12. *Mem Del En Perse*, fig. XIII, p. 58; Mode, *op. cit.*, p. 4.; Mackay, *op. cit.*, Vol. I, p. 345; Piggott, *Prehistoric India*, p. 208.
13. Legrain, *Culture of the Babylonians*, pl. XXVII, fig. 508.

extent Indus Valley, adopted the cylindrical seals under the influence of the Semetic culture<sup>1</sup>. It may, however, be pointed out that the cylinder seals of Susa and Mohenjo-daro belong to Pre-Sargonid period and in all probability the cylinder seals, found at Mohenjo-daro, Kalibangan<sup>2</sup>, and other places, were imports from Mesopotamia which was their original home. In this connection it is extremely significant to mention that a cylinder seal, found at Tell Asmar, depicts typical Indus motifs, e.g., elephant, rhinoceros, and crocodile<sup>3</sup>. On the whole, we have now seven cylinder seals found at different Indus sites—a fact which shows that Mesopotamian goods did come to the Indus sites, probably directly. In an example, an unicorn is found carved on the archaic Sumerian seal. Since unicorn motif is typically Indus, its presence on Sumerian seals<sup>4</sup> may be attributed to the Indo-Mesopotamian trade contacts.

It is equally significant to note that eight seals of the Indus valley bear the depiction of buffalo-head in typical Sumerian style of showing both the rugged horns<sup>5</sup>. A seal from Mohenjo-daro bear two crouching antelopes. Since antelopes frequently occur on the seals from Elam and Sumer and not Indus Valley, it can easily be inferred that it was a copy of a West Asian motif<sup>6</sup>. Similarly, a lonzenge-shaped seal shows the West Asian motif of an eagle and snake; the head of the eagle is turned to the left and its wings are spread, closely resembling the bronze eagles from Susa and Tell Brak<sup>7</sup>.

Wheeler has drawn our attention to a seal, where a buffalo is attacking a number of people, lying on the ground around him. The buffalo has been taken to represent a god (or an emblem) attacking his enemies. A similar scene has been noticed on a slate palettes of the First Dynasty of Egypt<sup>8</sup>.

Representation of urus-like animal on a seal from Mohenjo-daro has been interpreted as a symbol of the solar deity<sup>9</sup>. If so, this is an exception. However, on the early seals and pottery of Sumer and Elam this motif frequently occurs<sup>10</sup>. The

1. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. XXVIII, 1947, p. 166.
2. *IAR*, 1963-64, p. 31.
3. Frankfort, *Cylinder Seals*, p. 305; Lamberg-Karlovsky, *op. cit.*, p. 106; Mackay, *op. cit.*, (Seal No. 17).
4. Mackay, *op. cit.*, Vol. I, pp. 327-28.
5. *Ibid.*, p. 330, Nos. 257, 279, 342, 445, 510, 587, 663, 696.
6. Wheeler, *Indus Civilization*, p. 78; Rao, "A Persian Gulf Seal from Lothal", *Antiquity*, Vol. XXXVIII, 1963, p. 98; Marshall, *op. cit.*, Vol. I, p. 391.
7. Wheeler, *Indus Civilization*, p. 78.
8. *Ibid.*, pp. 336-37; Capart, *Primitive Art in Egypt*, pp. 242-43, figs. 181-82.
9. Mackay, *op. cit.*, Vol. I, p. 339, No. 641, in pl. C(G).
10. Gadd, "Seals of Ancient Indian Style found at Ur", *Proc. Brit. Acad.*, Vol. XVIII, pp. 21-23.

same is also depicted on a pottery seal from Kish and on the stone seals of Susa, almost in a similar manner<sup>1</sup>. Figure of a ship is depicted on a seal from Mohenjo-daro<sup>2</sup> and some of the cylinder seals of Sumer bear similar motifs<sup>3</sup>.

The system of weights and measures also establishes a link between Indus-Valley and Western Asia. The Harappan weight-system was, to some extent, similar to that of Babylon<sup>4</sup>. Cubical chert weights, discovered at Kish, recall their parallels from Harappan sites<sup>5</sup>. This type of weights occur also in early Mesopotamia, Elam and Egypt<sup>6</sup>. The shell scale<sup>7</sup> from Mohenjo-daro is divided accurately into units of 0.264 inches with a mean error of only 0.003 inches, and of the nine divisions preserved, a group of five is demarcated by dots of which one (perhaps marking the tenth of a series) is further emphasized by a circle. The five divisions represent 1.32 inches which may have risen to a 'foot' of 13.2 inches. The same measurement, it is significant to note, was in use in Egypt during the XII Dynasty. Similarly, a fragmentary rod of bronze from Harappa with markings in lengths of 0.367 inches, which is half of the digit in a cubit measurement of about 20.7 inches, has its exact counterparts in Egypt, Babylonia, Asia Minor and elsewhere<sup>8</sup>.

A cylindrical vase (Fig. 34.4,) found at Khafajah in the Diyala region of Mesopotamia, bears different scenes typically Indian in character<sup>9</sup>. In the first scene, two humped bulls have been depicted with a female figure<sup>10</sup>. In the second scene, two panthers grasp a snake in each hand. In the third scene, a few snakes and a panther have been shown. In another scene, the humped bull with two birds, probably eagles and a scorpion have been depicted. The humped bulls of this vase have a strong similarity with those found on Harappan seals. A seal from Mohenjo-daro depicts two birds and an amulet from the same site bears the motif of the two cobras with a deity. The birds and cobras are stylistically similar to those on the

1. Mackay, "A Sumerian Palace and the Cemetery at Kish, Mesopotamia II", *Anthropology Memoirs*, Field Museum, Chicago, Vol. I, pl. XLII, 5.
2. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 340.
3. Ward, *The Seal Cylinders of Western Asia*, p. 402 ; Early Minoan seals ( Hall, *The Civilization of Greece in the Bronze Age*, pp. 35-39 ) and Predynastic pottery can also be seen on an ivory knife-handle of Gebel-el-Arak now in the Louvre museum. (Mackay, *op. cit.*, 340-342).
4. Mackay, *op. cit.*, Vol. I, p. 604.
5. Rao, "Lothal and West Asia", *Proceedings of the International Conference on Asian Archaeology*, New Delhi, 1961, p. 47.
6. Marshall, *op. cit.*, Vol. I, pp. 463-64; The Egyptian barrel weights have resemblance with the Indus Valley specimens. (Mackay, *op. cit.*, p. 403).
7. Mackay, *op. cit.*, Vol. I, p. 404 ; Wheeler, *The Indus Civilization*, pp. 83-84.
8. Vats, *Excavations at Harappa*, Vol. I, p. 365 ; Wheeler, *Indus Valley Civilization*, p. 84.
9. Durrani, "Stone vases as evidence of connection between Mesopotamia and the Indus Valley", *AP*, Vol. I, 1964, p. 79.
10. *Ibid.*, According to Mrs. V. Vuren, she is a rain goddess, while Mallowan considers this figure to be a male.

vase mentioned above. It is, therefore, but natural to infer Indian inspiration with regard to the vase.

A small stone head, found at Dabarkot<sup>1</sup> (Fig. 32.7) and probably belonging to a phase of the Harappa Culture, shows affinities with sculptures from Sumer and the Diyala region<sup>2</sup>. The indication of eyebrows by means of a notched groove, encrusted eyes, projecting nose, thin mouth and the rendering of the ears by means of a flat oval protuberance, the typical features of Sumerian sculptures and the same are seen in this head. The same characteristics are noticeable in a head found at Nintu temple of Khafajah<sup>3</sup>. During Caspers has rightly observed that there are only two possibilities : either it is an import from Sumer or Diyala region through commercial intercourse or it has been made locally after a Mesopotamian model<sup>4</sup>.

### Sources of metals and stones

Detailed examination of the wide distribution of various metals and stones on chalcolithic sites, shows that there were commercial contacts of India with her western neighbours. The Harappans, as the materials of different antiquities show, were well acquainted with gold, silver, copper, tin, lead, semi-precious stones, etc<sup>5</sup>. Gold seems to have been obtained from Afghanistan and Persia<sup>6</sup>, and perhaps also from Mysore<sup>7</sup>. Silver was obtained from Iran and Afghanistan, and possibly also from south India<sup>8</sup>. In any case, most of the copper must have come from Rajasthan, and the remaining quantity came from Afghanistan and Persia<sup>9</sup>. It has been suggested by Rao<sup>10</sup> that copper and copper-alloys might have come to Lothal from West Asia also since the bun-shaped copper ingots of similar size, weight and composition have been found both at Lothal and Susa. The Lothal ingot measures 10 cm. in diameter and 4 cm. in thickness and weights 1.438 kg. The Mohenjo-daro ingots vary from 15 to 24 cm. in diameter<sup>11</sup>.

1. Stein, "An Archaeological Tour in Waziristan and Baluchistan", *MASI*, No. 37, 1929, pl. XVI.
2. During Caspers, "Further Evidence for Cultural Relations Between India, Baluchistan and Iran and Mesopotamia in Early Dynastic Times", *JNES*, XXIV, 1965, Nos. 1-2, p. 54.
3. Frankfort, *More sculptures from the Diyala Region*, *Oriental Institute Publications*, LX, A.B. Plate 22. No. 235.
4. During Caspers, *op. cit.*
5. Wheeler, *Indus Civilization*, p. 58 ; *Civilization of Indus Valley and Beyond*, pp. 64-65 ; Piggott *Prehistoric India*, p. 174.
6. Piggott, *op. cit.* ; Wheeler, *Indus Civilization*, p. 58.
7. *Ibid.*, Mukerjee, *The Culture and Art of India*, p. 46.
8. Wheeler, *op. cit.*, p. 58 ; Marshall, *op. cit.*, Vol. I, p. 30 ; Vats, *op. cit.*, p. 379.
9. Marshall, *op. cit.*, Vol. I, p. 30.
10. Rao, "A Persian Gulf Seal from Lothal", *Antiquity*, XXXVII, p. 98.
11. Rao, *Lothal and the Indus Civilization*, p. 81. See also the comparative statement of bronze metallurgy of objects and ores from Lothal, Mohenjo-daro and Khetri which clearly shows that the ingots are not of Khetri origin.

In this connection it may be mentioned that copper objects with arsenic contents occur at different Harappan sites. The same copper-arsenic alloys were also used in Egypt, Turkestan and Cyprus in very early times<sup>1</sup>. This may imply the existence of the same technological level. Tin as an alloy for making bronze might have come to India from the mines of Khorasan and Karadagh districts in northern Iran<sup>2</sup>. Lead (objects of which are sometimes found along with copper objects at the Indus sites) was obtainable from the silver mines of Afghanistan and Persia<sup>3</sup>.

### Other objects

Bitumen was widely used as water-proofing material. The immediate sources of Harappan 'bitumen' lie in Isa Khel on the bank of the Indus and Marri hills or Sanni in Baluchistan, although it is possible that a part of it came in boats from Hit on the Euphrates<sup>4</sup>. Red ochre used as slip for pottery was brought to the Indus Valley probably from Kutch, Central India and from Hormuz and other islands in the Persian Gulf<sup>5</sup>.

Three semi-precious stones, used primarily in jewellery turquoise, lapis lazuli and jade, were certainly imported from western neighbours. Lapis lazuli is believed to have been brought from Badakshan<sup>6</sup>, a province of northern Afghanistan, turquoise came from Khorasan and other parts of Persia<sup>7</sup> and jade from the Pamirs, eastern Turkestan and Tibet<sup>8</sup>. It may be mentioned that these immediate neighbouring sources are still being used for extracting the above mentioned minerals for commercial purposes and that mineralogists have located traces of ancient mining in these regions.

Many other industrially useful materials, such as faience and shell, seem to be imports from the Persian Gulf and Red Sea<sup>9</sup>. Faience, it may be mentioned, was widely used in Egypt, Crete, and Mesopotamia<sup>10</sup>. It is possible that the Indus people learnt the technique of faience making, *i.e.*, glazing the steatite paste, from their West Asian friends. Indian exports, on the other hand, consisted of wood. According to Prof. Sayce, Indian teak, belonging to an early date, has been discovered from the ruins of Ur of Chaldees<sup>11</sup>.

1. Vats, *op. cit.*, p. 379.

2. Marshall, *op. cit.*, Vol. I, p. 483; Piggott, *op. cit.*, p. 174.

3. Marshall, *op. cit.*, Vol. I, p. 30.

4. *Ibid.*, p. 32.

5. *Ibid.*

6. Wheeler, *op. cit.*, p. 59; see also *Civilization of Indus Valley and Beyond*, p. 64.

7. Wheeler, *op. cit.*; Piggott, *Prehistoric India*, p. 174; Marshall, *op. cit.*, Vol. I, p. 32.

8. *Ibid.*; Wheeler, *Indus Civilization*, p. 59.

9. Marshall, *op. cit.*, Vol. I, p. 32.

10. Vats, *op. cit.*, p. 408.

11. Sayce as quoted in Dixit's article, "Some aspects of civilization of the Copper and Bronze Age in India", *ABORI*, Vol. 31, 1950, p. 217.

## Beads and Jewellery

Various types of beads and other jewellery items, unearthed at different sites, seem to indicate, to a certain extent, that India, Mesopotamia, and Egypt, directly or indirectly, through the common pool of ideas, were linked through certain common technological bonds. A large number of carnelian beads with elaborate designs (etched) in white have been discovered at Mohenjo-daro<sup>1</sup>, Lothal, Harappa, Kalibangan and several other Indus sites. At Lothal there was a factory for the manufacture of beads. Woolley found them in the early graves at Ur.

From the excavations at Chanhudaro, many etched carnelian beads have come to light which are similar in shape and design to those from Ur<sup>2</sup>. A bead from Shah Tepe in Iran has been found ornamented with a typical Harappan design. According to Childe, Indus Valley was the centre of manufacture for these beads and probably the Indus citizens had a bead-making workshop at Ur also<sup>3</sup>. Carnelian beads of different shapes and designs of the Indus type, have found their way to Kish and Tell Asmar as well<sup>4</sup> (Fig. 35). Since at Mesopotamian sites they have been found only in a limited quantity while at Harappan sites we have even a bead-making factory, it is possible to postulate that India was the source of these beads for West Asia.

Similarly, dentalium beads also, found at a few Mesopotamian sites, probably came from Lothal and other Indus sites<sup>5</sup>. Circular beads of gold with a prominent axial tube have been recovered from Mohenjo-daro. Similar beads have been unearthed at Mesopotamian sites of C. 2400-2300 B.C. and in Troy II G. of about 2300 B.C.<sup>6</sup> The gold disc-beads of Indus Valley are analogous to the beads of Babylon, Egypt and Troy<sup>7</sup>. The gold discoid beads, from the Royal Cemetery at Ur<sup>8</sup>, resemble the beads found at Mohenjo-daro<sup>9</sup>. Somewhat similar is the case with numerous 'segmented' faience beads which have been noticed at every Indus site (Fig. 36.10, 11). These beads are found at Tell Brak in northern Syria, at Jamdat Nasr (3000 B.C.) and also in Crete and Egypt<sup>10</sup>. The similarity of segmented beads

1. Marshall, *op. cit.*, Vol. III, Pl. CXLVI, 43; Mackay, "Further Links Between Sind, Sumer and Elsewhere", *Antiquity*, Vol. V, 1931, pp. 459-60; Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 503.
2. Mackay, *Early Indus Civilization*, p. 86.
3. Childe, "India and the West Before Darius", *Antiquity*, Vol. XVIII, 1939, p. 12; During Caspers, "Etched Cornelian Beads", *BIA*, No. 10, 1971, pp. 83-97.
4. Wheeler, *Indus Civilization*, p. 75; also in "Civilization of the Indus Valley and Beyond", p. 52 and During Caspers, *op. cit.*
5. Rao, "A Persian Gulf Seal from Lothal", *Antiquity*, Vol. XXXVII, p. 98.
6. Wheeler, *Indus Civilization*, p. 87.
7. Mackay, *op. cit.*, p. 84.
8. Woolley, *Ur. Excavations*, Vol. II, *Royal Cemetery*, p. 366, fig. 70 (16).
9. Marshall, *op. cit.*, p. 515.
10. Wheeler, *Civilization of the Indus Valley and Beyond*, p. 52, and *Indus Civilization*, p. 74.

found at Harappan sites with those from the Mediterranean world had long been recognized and has now been reinforced by spectrographic analysis which shows identity of composition between a bead from Harappa and another from Knossos. The material of this bead is different from that of other beads and this difference permits us to conclude that probably they originated from the same source; the source remains unidentified<sup>1</sup>. A segmented bead from Shah Tepe might have been obtained either from Harappa or from Sumer<sup>2</sup>. Similar beads have also been reported from Altin Depe, Anau and other places in south Turkmenia<sup>3</sup>. It is significant to note that in recent years, segmented beads, as also disc beads, were reported from a few Neolithic-Chalcolithic sites of south-India and the Deccan, e.g., Nagarjunakonda, Inamgaon and other places. Therefore, it is likely that the source lies in the Harappan sites. But the priority of these sites over the Harappan sites in point of time has not yet been established.

The glaze on the black faience beads have a similarity with the manganese glazes of the VI Dynasty of Egypt<sup>4</sup> and it is possible that this technique had also come to the Indus people through a site or sites in West Asia. Beads with median ribs occur in the Indus sites and also in some of the important Mesopotamian towns, such as Tell Asmar and Ur<sup>5</sup>. A whorl bead has been found at Lohumjo-daro in the Jhukar levels which are now considered as late Harappan. Similar specimens occur at Hissar III and Anau III<sup>6</sup>.

Two beads of lapis lazuli, found at Monenjo-daro<sup>7</sup>, are very similar to the Sumerian ones in form. Probably they were manufactured in Sumer and then exported to India<sup>8</sup>. A 'Fly-shaped' bead, found at Harappa<sup>9</sup>, exhibits likeness to a type from Egypt and also from the "A" graves at Kish and Ur<sup>10</sup>. Sickle-blade beads<sup>11</sup>, from the Upper level of Mohenjo-daro, can be compared typologically with the commonistic beads from Sumer and Egypt, though in lesser frequency at the earlier place. Since these are rare in the Indus but common in Sumer, Mackay feels that the Indus people either received them from Sumer or they made them locally after Sumerian models<sup>12</sup>.

1. Wheeler, *Indus Civilization*, p. 89.

2. Piggott, *Prehistoric India*, p. 209.

3. Gupta and Schetenko, "New Evidence of Harappa Culture in the Soviet Central Asia", *Bharati*, No. X & XI, 1966-68.

4. Vats, *op. cit.*, Vol. I, p. 405.

5. *Ibid.*, p. 406.

6. Gordon, *The Prehistoric Background of Indian Culture*, p. 80.

7. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I., p. 499.

8. Marshall, *op. cit.*, Vol. 2, p. 55.

9. Mackay, *op. cit.*, Vol. I, p. 642.

10. *Ibid.*

11. *Ibid.*, p. 509.

12. *Ibid.*

Capping the finely cut variegated hardstone beads with gold was a very skillful technique in vogue in Sumer and the Indus Valley, both. Woolley found such beads in the early graves of Ur and they bear great resemblance with the beads of Mohenjo-daro<sup>1</sup>. The long, barrel-shaped faience beads, found at Chanhudaro II, are found decorated in the manner of segmented barrel beads of Jamidat Nasr<sup>2</sup>. The same type of beads were made a little later in Egypt<sup>3</sup>. Certain dark green long barrel-beads, reported from Mohenjo-daro<sup>4</sup>, are exactly similar to those found at Ur<sup>5</sup>.

The discovery of some amazonite beads which are taken to be of Indian types in the lower levels of Ur of Al'Ubaid times suggests that Indian products were coming into Sumer at a very early period<sup>6</sup> since, chronologically, Al'Ubaid period is Pre-Harappan. Onyx beads appear only rarely at Indus sites. Sumerians also made use of onyx for making beads. Mackay once suggested that in India these were imports from Sumer but since onyx belongs to the agate family of precious stones available in plenty at Rajapipla in Gujarat and other places in India such a surmise is far from convincing.

Lozenge-shaped faience beads are reported from Kish and Ur in the Royal Tombs<sup>7</sup> in central and northern Syria<sup>8</sup> as also at Nal in Baluchistan<sup>9</sup>. Since the same type of beads occur at Mohenjo-daro<sup>10</sup>, Lothal and Kalibangan also, it may be inferred that the Harappans also shared the prevailing fashion of West Asia. The Harappan steatite beads, identical with those found at Ur<sup>11</sup>, should also be seen in the same context. A steatite pendant from Harappa, decorated with a device of an eagle with widespread wings and extended legs, is related to both Sumer and Elam<sup>12</sup>.

The hemispherical terminals of necklaces were commonly used in the Indus Valley, Sumer and Egypt<sup>13</sup>. Curiously enough, steatite amulet from Mohenjo-daro, apart from the ring at the side, bears analogy to the Egyptian sign for stability<sup>14</sup>.

1. Mackay, "Further Links Between Sind, Sumer and Elsewhere", *Antiquity*, Vol. V, 1931, p. 465.
2. Piggott, *op. cit.*, p. 225.
3. *Ibid.*
4. Mackay, *op. cit.*, Vol. I, p. 663.
5. Woolley, *Ur Excavations*, Vol. II, *Royal Cemetery*, pl. 132.
6. Carleton, *Buried Empires*, p. 160.
7. Marshall, *op. cit.*, p. 35.
8. Mackay, *op. cit.*, Vol. I, p. 518.
9. Hargreaves, *Excavations in Baluchistan*, MASI, No. 35, 1929, Pl. XV(a).
10. Mackay, *op. cit.*, Vol. I, p. 518.
11. Vats, *op. cit.*, p. 395.
12. ASIAR, No. 12, Pl. XVIII. See also, Childe, *Aryans*, pl. VI.
13. Mackay, *op. cit.*, Vol. I, p. 641, pl. C.
14. *Ibid.*, p. 523, pl. No. CXXXVI, 75. This sign is now generally thought to represent a looped tree and it was a favourite amulet in Egypt.

The anklet on the foot of a little bronze statue resembles the anklet appearing on a figure in a fresco at Knossos in Crete<sup>1</sup>. Moreover, such anklets were known in Egypt and Sumer also in very early times<sup>2</sup>. Evans found in the Babylonian graves<sup>3</sup> bodies adorned with this ornament.

Several statues from Mohenjo-daro have fillets on their foreheads. The way of ornamentation of these fillets, either with rows of dots or the figure of animals, is similar to the Sumerian way of ornamentation<sup>4</sup> although the similarity is of a generalized kind. A hairpin, with a double spiral head, discovered at Chanhudaro, resembles the pins found on the islands of the Aegean sea<sup>5</sup> as also in the early Asiatic settlements, especially at Anau and Altin Depe<sup>6</sup> and several Iranian sites<sup>7</sup>. Another bronze pin has a coiled head. Similar pins have come from Sumer, Egypt and the Caucasus<sup>8</sup>. There is a striking similarity between the spiral and animal headed pins of Harappa and north-east Iran<sup>9</sup>.

The bronze dancing-girl of Mohenjo-daro and courtesans of Mesopotamia probably indicate that dance was a common recreation in both the regions<sup>10</sup>. However, the figurine from Mohenjo-daro is unique and can hardly be quoted as evidence in favour of Indo-Mesopotamian contacts. We have figures of men (according to Mode, these are dancers) in groups of four or seven on Indus seals also<sup>11</sup> but here, we feel, they may be in some mythological context (Fig. 37. C). Similar figures occur on many vase paintings of the Village Cultures of the Iranian Plateau<sup>12</sup> (Fig. 37. E) and Crete (Fig. 37. F).

On two of the amulets from Indus Valley is to be seen an elongated percussion drum. A tambourine is seen slung from the neck of one of the terracotta male figurines<sup>13</sup>. Woolley has restored the remains of a similar specimen in Sumer<sup>14</sup>. If certain signs of the Iranian script represent harps and lyres, it can be said that some musical instruments of that type were commonly used in Sumer<sup>15</sup>.

1. Mackay, *op. cit.*, p. 538, pl. LXXIII, 5.

2. *Ibid.*

3. *Ibid.*

4. Mackay, *Early Indus Civilization*, p. 86.

5. Turner, *The Great Cultural Tradition*, Vol. I, pp. 168-69.

6. Gupta and Schetenko, "New Evidence of the Harappa Culture in the Soviet Central Asia", *Bharati*, No. X & XI, 1966-68, p. 195.

7. Piggott, "Notes on certain metal pins and maceheads in Harappan Culture", *AI*, No. 4, pp. 26-40.

8. Mackay, *op. cit.*, Vol. I, p. 539; *Early Indus Civilization*, p. 90.

9. Piggott, *op. cit.*

10. Mukerjee, *The Culture and Art of India*, p. 46.

11. Mode, *op. cit.*, pp. 9-10, fig. 37.

12. *Ibid.*

13. Mackay, *Early Indus Civilization*, p. 141.

14. *Ibid.*

15. Childe, *What happened in History*, p. 124.

Hunting scenes are commonly depicted on different objects from Mohenjo-daro, Susa, Crete and Palestine. Thus a copper tablet from Harappa presents a hunting scene in which the hunter faces an animal with bows and arrows (Fig. 38. A). A similar scene is depicted on a seal from Susa (Fig. 38. B), from Crete (Fig. 38. C) and from Palestine<sup>1</sup>.

Excavations have yielded many types of cubical dices at Mohenjo-daro. Examples of the same types came from Tell-el-Amarna in Egypt. However, due to difference in the arrangement of signs on these dices, it cannot be said for certain that the dices of the West Asian sites, were actually exported from India<sup>2</sup>. However, it is interesting to note that numerical signs on the Indian dice are indicated by small inlaid beads. From Sumer we have also a similar specimen<sup>3</sup>.

The occurrence of gamesmen with heads of ram or ox at Lothal<sup>4</sup> indicates the prevalence of the game of chess or some other similar game in the Harappan towns. The Royal graves of Ur have yielded a very good example of a chess-board<sup>5</sup>. A brick, with incised rectangles in four rows each with three blocks discovered at Mohenjo-daro, may also represent a game-board. The game, played on this board seems to have some similarity with an ancient Egyptian game<sup>6</sup>. Another brick with the markings of twenty-six compartments, resembles a Sumerian board, discovered by Woolley at Ur<sup>7</sup>. It is interesting to note that cones with incurved sides, found commonly at Mohenjo-daro, Harappa, Kalibangan and other places are similar in form to the gamesmen of ancient Egypt<sup>8</sup>.

A very significant find from Harappa is a miniature model of two-wheeled copper chariot<sup>9</sup>. Many specimens of war chariots have been found on the mosaic standard at Ur and all of them have two wheels<sup>10</sup> of almost similar type. Although the positive evidence of wars and war-chariots is lacking in the Harappan context yet wheeled vehicles of somewhat similar form occurring in these two regions may indicate to some extent that Wheeler is right when he says that 'ideas have wings'.

Mohenjo-daro has also yielded stone balls and marbles which are similar to those found in Sumer (Jamdat Nasr) and Egypt<sup>11</sup>. Bull-fight seems to be a common

1. Mode, *op. cit.*, p. 11.

2. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 559; "Further Links Between Sind, Sumer and Elsewhere", *Antiquity*, Vol. V, 1931, p. 63.

3. Mackay, *Further Excavations at Mohenjo-daro*, p. 560.

4. IAR, 1959-60, pl. XVI, A.

5. Woolley, *Ur of Chaldees*, pl. V (b); *Ur Excavations*, Vol. II, *The Royal Cemetery*, Pls. 95-96.

6. Mackay, *Early Indus Civilization*, p. 139.

7. *Ibid.*

8. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 572, pl. CVI, 1, 2, CXXXVII, 4, 6.

9. Vats, *op. cit.*, pp. 99-100.

10. Cf. Woolley, *The Sumerians*, p. 50.

11. Mackay, *op. cit.*, Vol. I, p. 565.

form of recreation both in the Indus Valley and Crete<sup>1</sup> since while a few Indus seals (Fig. 37. A) present the scene of bull-fight<sup>2</sup>, some seals and wall paintings of Knossos of the Middle Minoan and Late Minoan periods<sup>3</sup> (Figure 37.B) also include the same representation. It may be pointed out that although the resemblances are distant, in certain details they exhibit the same conceptual framework. The ritual is divided into two parts : (a) bull-fight, and (b) bull-sacrifice<sup>4</sup>. These scenes probably represent the sacrifice of a bull to a deity which may be the Mother Goddess. The last phase of this ritual in Crete was the offering of bull's body at the shrine of the Mother Goddess. Fabri thinks that similar other features found on the Indus seals are the snake rising up behind the bull as also behind the sacred tree<sup>5</sup>. The snake and the sacred tree both were connected with the cult of the Mother Goddess in Crete also<sup>6</sup>. It may, however, be pointed out that the similarity is again one of concept without implying a direct contact between India and Crete.

*Religious Aspect* : No structure that can definitely be labelled as 'religious' has so far been unearthed in any of the sites of the Harappa Culture, whereas temples form a very important feature of early Mesopotamian architecture. On the conceptual level again, the Harappan terracotta female figurines (Pl. VII b), called Mother Goddess, and referred to earlier, may be compared with the female figures of Syria, Soviet Central Asia, Crete, Elam, Mesopotamia, Transcaucasia, Asia Minor, Palestine, Cyprus the Cyclades, the Balkans and Egypt<sup>7</sup>. Myers<sup>8</sup> believes that this cult moved from Anatolia or Syria to Mesopotamia. Syro-Cretan type of Mother Goddess is perhaps one of the oldest forms of the Mother Goddess<sup>9</sup>. In Crete she is shown with a dove and a snake. Tree-worship is also an essential part of her worship. All these elements are also to be found at Harappa and Mohenjo-daro<sup>10</sup>. Some pot-sherds have been discovered at Lothal with snakes and trees painted on them<sup>11</sup>. The snake<sup>12</sup> and tree worship<sup>13</sup> was known to the Harappans, Elamites and Babylonians.

V2:7C 46

1. Mode, *op. cit.*, p. 9.
  2. Fabri, "The Cretan Bull—Grappling sports and Bull sacrifice in the Indus Valley Civilization," *ASIAR*, 1934-35, p. 59.
  3. Arthur Evans, *The Palace of Minos at Knossos*, E.G., Vol. III, pls. XIX, Figs. 123, 128, 129, 143, 144, 145, 146, 147.
  4. Fabri, *op. cit.*, 1934-35, p. 93.
  5. *Ibid.*
  6. *Ibid.*, pp. 98-99.
  7. Mackay, *Early Indus Civilization*, p. 53 ; Marshall, *op. cit.*, Vol. I, p. 49.
  8. Myers, *Camb. Ant. Hist.*, Vol. I, p. 91; Farnell, *Greece and Babylon*, Vol. I, pp. 87-92 ; Zimmer, *The Art of Indian Asia*, pp. 21-22.
  9. Mode, *op. cit.*, p. 7.
  10. *Ibid.*
  11. Rao, *op. cit.*, Fig. 24.4.
  12. Mukerji, *The Culture and Art of India*, p. 52.
  13. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. X XVIII, 1947, p. 168.
- 127390

Sakti worship, a later canonized form of Mother Goddess worship, appears to have originated quite early. In this connection it is to be noted that certain pre-Aryan cults of the Near East show some significant features of Indian Śaktism. Many specimens of the Mother Goddess along with a young god by her side have been discovered from Asia Minor to the shores of the Mediterraneans<sup>1</sup>. As Marshall puts it, in Punic Africa she is Tanit with her son; in Egypt, Isis with Horus; in Phoenicia, Ashtaroth with Tammuz (Adonis); in Asia Minor Kybele with Attis; in Greece, Rhea with the young Zeus<sup>2</sup>. The central figure of Mother Goddess in these localities with her partner god, created by herself, can be compared with the Indian Mother Goddess with her partner, God Śiva, whom, according to the staunch Sāktas, she creates herself. This parallel may provide a link between the religions of these countries<sup>3</sup> although we do not know, at the present state of our knowledge, the real strength of this link.

A few terracotta figurines of the dove have been unearthed at Mohenjo-daro<sup>4</sup>. Similar terracotta figures have been unearthed in Crete, Musyan, Elam and Ur<sup>5</sup>. In most of the West Asian examples there is a hole at the base of the figure, meant probably to support the figure on a stick. Similar holes are present in the Mohenjo-daro models as well. Another type of dove, with closed wings and set on a low pedestal, was popular both at Mohenjo-daro and Kish<sup>6</sup>. Dove appears to be closely associated with Mother Goddess. It is considered as a sacred bird in Crete<sup>7</sup>, Sumer and Middle East.

Crosses (Fig. 31.6 top), circles (Fig. 31.17), squares (Fig. 31.16) and the svāstika (Figs. 31.14, 15) were popular motifs, found on pottery, stone objects, etc., recovered from several Indus sites. The people of Elam, Sumer, Chagar Bazar and Babylon were familiar with these motifs<sup>8</sup>. These were known in Iran (Figs. 31.18, 19), Syria (Fig. 31.20, 21) and Crete also. Obviously, these motifs were popular over a very wide area, although it does not mean that everywhere they meant the same. The motif known as Greek Cross, although rare in the Indus Valley, was probably borrowed from Elam<sup>9</sup>. Some scholars affiliate this motif with the Mother Goddess<sup>10</sup>.

1. Marshall, *op. cit.*, Vol. I, p. 57.

2. *Ibid.*

3. *Ibid.*, p. 58.

4. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 295.

5. Mackay, "Further Links Between Sind, Sumer and Elsewhere", *Antiquity*, Vol. V, 1931, p. 466.

6. Mackay, *Further Excavations at Mohenjo-daro* Vol. 1, p. 295.

7. Mode, *op. cit.*, p. 8; Mackay, *Early Indus Civilization*, p. 60.

8. Mackay, *op. cit.*, p. 71; *Further Excavations at Mohenjo-daro*, Vol. I, pp. 342, 656.

9. Mackay, *Further Excavations at Mohenjo-daro*, Vol. I, p. 656.

10. *Ibid.*

But all the examples quoted here and views of several scholars on them are only of a generalized kind and admit a variety of explanations.

A seal from Mohenjo-daro shows a curious figure with three faces and seated on a low pedestal in a typical Yogic posture. This male god has been designated by Marshall as the prototype of historic Paśupati form of Śiva<sup>1</sup>. Multi-headed form of deities is very ancient in India. This feature was also prevalent in Mesopotamia in protohistoric times, viz., trinities such as Sin, Shamash and Ishtar, Anu, Enlil and Ea<sup>2</sup>. One is, however, not sure if there was any underlying unity in the two concepts.

Trefoil was a sacred pattern to the Sumerians and is found on the garments of the figures of priests. Significantly, the same motif occurs on the garment of a stone bust from Mohenjo-daro, identified by scholars as that of a yogī or priest<sup>3</sup>. The motif occurs on some Babylonian statues<sup>4</sup> also.

Theriomorphic gods can be seen among the Hittites of Anatolia (Iasilikaya) and the Kassites of the Zagros mountains. At Mohenjo-daro also theriomorphic gods with the horns of the bison have been found. It may be mentioned that in Mesopotamia<sup>5</sup> horns indicate heavenly power.

On a seal from Mohenjo-daro, there is a representation of a hero or demi-god struggling with two tigers (Pl. XIII a). The hero of this scene can be compared with the Sumerian hero Enkidu or Gilgamesh who fights lions<sup>6</sup> (Pl. XIII b). Portrayal of this scene is so close to Sumerian depiction that one is led to infer that the Harappans might have been inspired by the Sumerian.

1. Marshall, *op. cit.*, Vol. I, pp. 52-53 ; Saletore, however, identified this figure with Agni., *New Review*, 55 X. 1939. According to K. N. Sastri the figure is in fact a composite god whose entire head is that of a buffalo, the arms are centipedes and the legs comprise two looped cobras. Sastri, Paper read at the *International Conference on Asian Archaeology*, New Delhi, 1961, Summaries, p. 52. V. S. Agrawal includes it in his conceptual frame-work of Śiva-Paśupati and connects it with the Rigvedic Rudra. A. Ghosh and S. P. Gupta refute this theory and feel that at the present stage of our knowledge we cannot fully comprehend it. The five Vedic animals are not the same as shown on the seal.
2. *Ibid.*, For example, the dragon figures in Delaporte, Mesopotamia, 1812.
3. Marshall, *op. cit.*, p. 54.
4. Zimmer, *The Art of Indian Asia*, p. 28.
5. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. XXVIII 1947, p. 168.
6. Marshall, *op. cit.*, Vol. I, p. 67, pl. CXI, p. 357; Piggott, *Prehistoric India*, p. 203 ; Mackay, *Early Indus Civilization*, p. 67.

ans might have been inspired by the Sumerian example<sup>1</sup>, although there is direct archaeological proof for that.

On two seals<sup>2</sup>, one each from Harappa and Mohenjo-daro, two genii class beasts, tigers, appear. Woolley unearthed certain objects at Ur depicting similar animal figures, for example, on the plaque of shell inlay from the King's Grave we find two genii, one of which, a dog, is carrying some sacrificial heads on an altar, a lion holding two sacrificial vessels and a dog playing on a harp<sup>3</sup>. The conception of sacredness of the genii class animals is to be found not only in India and Mesopotamia but also in Greece. However, there is no certainty about the place of its origin<sup>4</sup> and the direction of its diffusion. The evidence establishes only the view that in some way or the other these cultures happened to share certain common ideas, concepts and beliefs.

Interestingly enough, two Harappan amulets bear the depiction of the effigy of a sacred animal, namely the Urus-bull, being carried in religious processions. This representation recalls the custom of carrying animal effigies in religious processions in ancient Egypt<sup>5</sup>.

The above similarities point at least to a generalized relationship, not direct in every case. Anyhow between India, Mesopotamia, Elam, Crete and Egypt, trade and commerce must have been an important factor in bringing together the peoples of these regions. In some cases, however, we cannot be sure about the mechanism of contacts. Independent development of several concepts in different countries cannot be completely ruled out. Specific items, which definitely prove trade contacts, are very few<sup>6</sup>, and that too known only from the Indus Valley, Afghanistan, Baluchistan, Mesopotamia, Persian Gulf region, Iran and Central Asia: these are certain seals and sealings, etched carnelian beads, copper ingots, ivory dice, copper-bronze axe-adze, terracotta square-cut bearded head, steatite toilet boxes (Figs. 28, 29)<sup>7</sup>.

1. Marshall, *op. cit.*, Vol. I, p. 67, pl. CXI, p. 357; Piggott, *Prehistoric India*, p. 203; Mackay, *Early Indus Civilization*, p. 67; also Wheeler, *Indus Valley Civilization*, p. 80. Mode, however, does not agree with the theory of Sumerian influence on the Indus Seal. According to him, there is very little similarity between the subject matter of the Indus and Sumerian seals, and it would be wrong to believe that the Indians were familiar with the story of Gilgamesh. He even suggests that probably the scene depicted on the Harappan seal is not that of a fight. He further suggests that this depiction is more closer to the figures of Egyptian (*pl. XXI, Fig. 5. 1*) and Cretan art (*pl. XXI, Fig. 5. 2*) (Mode, *op. cit.*, p. 10).
2. Marshall, *op. cit.*, Vol. I, p. 70.
3. Woolley, *The Sumerians*, p. 44, pl. XI.
4. Marshall, *op. cit.*, Vol. I, p. 70.
5. Mackay, *Early Indus Civilization*, pp. 65-66.
6. Lamberg-Karlovsky, "Trade Mechanisms in Indus Mesopotamian Interrelations," *Puratattva*, No. 6, pp. 103-115.
7. Durrani, "Stone Vases as evidence of Connection between Mesopotamia and Indus Valley", *AP*, No. I, 1964, pp. 51-96.

lapis-lazuli objects, silver objects, ceramic types, etc. There is very little possibility of direct trade contacts between the Indus Valley, Crete, Egypt, Palestine etc., and, therefore, the similarities are in the nature of parallelism implying, at best, the spread of certain concepts, beliefs, rituals and art forms from one country to another, perhaps, in a chain sequence through the media which are not always easy to comprehend. The concept and image of Mother Goddess, the sacredness of the bull, the rituals connected with harvesting, etc., are such items of parallelism, in this chain of diffusion which do not always indicate 'contact' as such between one country and the other. Since most of the so far excavated Harappan towns give a look of material prosperity it seems to have been the result of increasing over-seas as well as inland trade. For example, according to the excavator of Lothal, the site was a port-city and articles such as beads of semi-precious stones, ivory objects, shell inlays, ornaments, etc., were actually manufactured in the town for purposes of export to West Asian markets. Indus seals with characteristic Indus motifs and letters were unearthed at Ur, Kish and Tell Asmar. The discovery of a number of circular seals with some Harappan motifs, and even characters, in Bahrain island, has made some scholars, including S. R. Rao and P. V. Glob, to suggest that the Harappan merchants residing in Bahrain were directly or indirectly responsible for their fabrication or circulation, or both<sup>1</sup>.

Some Sumerian and Akkadian documents also confirm these contacts<sup>2</sup>. These texts refer to the lands called Dilmun, Makkān and Meluhha<sup>3</sup>. Dilmun was considered as 'wordly paradise', a place where the sun rises. According to these documents, it was situated somewhere in the east of Sumer and was also a source of several raw materials. About 2450 B. C. wood was carried to Ur Nanshe of Lagash by the ships of Dilmun and the records of Sargon informs us that after a century his new capital became the sea-port of the ships from Dilmun, Makkān and Meluhha. In 2000 B. C. the merchants used to bring to Ur gold, silver, copper, lapis lazuli, stone beads, ivory combs, ornaments, eye paints, wood and pearls. Dilmun has been indentified by some scholars with the island of Bahrain, which must have been more an intermediary market than an original scource for goods. But the identification is not yet fully established<sup>4</sup>. Leemans identifies Meluhha with Western

1. Rao, "Shipping in Ancient India", *ICWTC*, p. 101 ; On the other hand the 'Persian Gulf Seal' at Lothal might have been brought by the merchants of Lothal.

2. Kramer, *The Sumerians*, pp. 276-280.

3. Hansom, "A periplus of Megan and Moluha", *BSOAS* (1973) 36, No. 3, p.553 ff. Also, Leemans, *Foreign Trade in the Old Babylonian Period* p. 159 ff.

4. Arunakumar has drawn our attention to a village called 'Tilmuna' near the famous Harappan town of Kalibangan in the Rajasthan desert. According to him, the name is the same as 'Dilmun' or 'Tilmun' of the Texts. Dilmun on this basis may be identified with the Harappa Culture. "On the location of Dilmun", *JOI.*, Vol. XXI, No. 4, 1972, pp. 348-50.

India<sup>1</sup>. Oppenheim identifies Meluhha with the Indus region<sup>2</sup>. Romila Thapar identifies it with Gujarat, excluding Kathiawar<sup>3</sup>. Kramer, who identifies Dilmun with Bahrain, thinks that Makkan and Meluhha were situated on the Persian shore, alongside the route to India<sup>4</sup>. According to Maurizio Tosi, the growth of Dilmun civilization was not connected with Mesopotamian civilization but it had contacts with eastern Iran via Umm-an-Nar and Bampur and where recent Italian, Russian and American excavations have demonstrated that the process of Urbanization was already well advanced by the third millennium<sup>5</sup> B.C. Whatever may be correct interpretation, the texts indicate howsoever indirectly, the existence of trade connections between the Harappan India and Sumer (Fig. 41).

Through this commercial intercourse the Indus Valley and West Asia seem to have influenced each other and thus cultural contacts developed between them. Town planning, houses, pottery, weapons, means of recreation, etc., of the peoples of the two countries suggest a close intercourse between them. If the people of the Indus Valley received the idea of township from adult Mesopotamia, as scholars like Wheeler seem to suggest, it is definite that the Harappans surpassed the Mesopotamians and other contemporary cultures in planning at least that portion of the township where the masses lived. In fact, they are to be credited with the earliest

1. Leemans, *op. cit.*
2. Oppenheim, "The Sea Faring Merchants of Ur", *Journal of the American Oriental Society*, Vol. LXXIV, 1954, pp. 6-17.
3. R. Thapar, "A Possible Identification of Meluhha", Cyclostyled copy. It may be mentioned that Meluhha has been identified with Ethiopia, south-eastern Iran and Western India. Romila Thapar has rightly pointed out that although the location of Meluhha in south-eastern Iran is possible, the sources of timber (probably, teak wood) and building stone, the two important items of export to Sumer according to the Sumerian texts, would not have been within easy reach at least for quantities required in trade. Further, there is hardly any seaport of significance on this coast and Meluhhan traders cannot be imagined in a context other than the sea-faring merchants, as is clear from the Sumerian texts. The identification with Ethiopia also raises some peculiar problems of raw materials of the items of export since Ethiopia lacks not only copper but also lapis lazuli and carnelian, even timber has not been a popular item of export from this country. Further, there is hardly any archaeological evidence from Ethiopia which might even remotely suggest contacts with Sumer in the Akkadian period, whatever evidence is there it belongs to the second and first millennia B.C. Romila Thapar has quoted an interesting evidence although she appears to have seen too much in it. The word Meluhha, a place name, is non-Sumerian and non-Sanskritic; it is, therefore, likely to be Proto-Dravidian, derived from *Melukku* meaning 'the extremity' or the 'outerside', and also 'western'. Gujarat is in Western India and it is the extremity of the Orient. It is like the 'aparānta' of Sanskrit.
4. Kramer, "The Indus civilization and Dilmun, the Sumerian Paradise Land", *Expedition*, vol. VI, 1964, pp. 44-52.
5. Tosi, "Dilmun", *Antiquity*, Vol. XLV, 1971, pp. 21-25.

'planned townships for the masses' in the world since the Mesopotamian city fathers planned not the entire townships, they planned only the individual buildings of the kings or the gods.

### Central Asia

Recent researchers have brought to light certain objects from a few sites located in the southern part of the Republic of Turkmenia in Soviet Central Asia which give an impression that the Indus Valley Civilization had some definite cultural-contacts with this part of the world also. Anau, Namazga Depe, Altin Depe, Khapuz Tepe, etc., are the sites which have opened new possibilities in the direction of understanding the new dimensions in the sphere of the movement of people and ideas in the protohistoric period of Indo-Pakistan sub-continent (Fig. 42). Here we have tried to collect some relevant material available on this aspect of the Indo-Central Asian culture-contacts.

It is significant to note that some of the typical Harappan pots viz., perforated cylindrical jar, carinated dish-on-stand, jar stands with concave or vertical or slanting profile, small oval jar with ledged shoulder and flat base, tall slender cylindrical vase with flat base and flared rim, bowl with Svastika mark, etc., have been recently discovered in the Turkmenian Republic of the U.S.S.R.<sup>1</sup> (Fig. 40, 1-8). Even some of the miniature vessels, so characteristic of the Harappan pottery, have their counterparts at Namazga Depe, Altin Depe and other sites in Turkmenia. The wares of both the sites exhibit the same type of clay and process of manufacture. However, there is a difference in slip : instead of the bright red slip of the Harappan pottery, the Central Asian pottery has pink and buff wash. There is, however, a fundamental uniformity in form between a number of Indian and Turkmenian vessels which could not have been possible without close contacts<sup>2</sup>.

In a recent intensive study of cultural contacts between India and Soviet Central Asia during the Harappan times, S.P. Gupta and Y. Schetenko, have brought to our notice some significant examples of antiquities. Thus, terracotta carts with solid wheels, and in one case an animal-headed cart at Altin Depe in Turkmenia, show very close affinity with the Indus examples<sup>3</sup>. Even the axle-knobs are similar (Fig. 40.29). Compartmented toilet containers of terracotta and also of stone, found at Mohenjo-daro, have their counterparts at Altin Depe, although in the latter case they were made of only burnt clay<sup>4</sup>, (Fig. 40.30). It is important to note that

1. Gupta and Schetenko, "New Evidence of the Harappa Culture in the Soviet Central Asia", *Bharati*, No. X and XI, 1966-68, p. 194 ; Masson and Sarianidi, *Central Asia: Turkmenia before the Achaemenids*, pp. 113-136.

2. *Ibid.*

3. Gupta and Schetenko, *op. cit.*, p. 194 ; also *ICWTC*, pp. 242-247.

4. *Ibid.*

this category of objects have been recovered from Pre-Dynastic times in West-Asia also<sup>1</sup>. A terracotta object, labelled as "window screen" and found at Chanhudaro, has also its parallel at Altin Depe<sup>2</sup> (Fig. 40.34). Similarly, the terracotta bulls from Mohenjo-daro<sup>3</sup> have a close likeness to that of a well-built terracotta bull with perfect naturalistic anatomical contours found at Altin Depe<sup>4</sup>, (Pl. XII b). According to these authors, likeness of this kind can also be observed in the case of spindle whorls, cones, dice, beads, etc. An oval object with peripheral holes from Altin Depe has also its counterpart at Mohenjo-daro<sup>5</sup> (Fig. 40.31), its identity as a net-sinker or weaving tool is conjectural.

A leaf-shaped dagger or knife without midrib, discovered at Altin Depe<sup>6</sup>, and another at Anau<sup>7</sup>, clearly bear the impression of the Harappan daggers or knives (Fig. 40.9). Knife with concave back and convex edge (Fig. 40.17), concave sickle (Fig. 40.11), chisel of rectangular cross-section (Fig. 40.12) found at Anau, also show similarities with some of the Harappan specimens<sup>8</sup>. There is still another piece of evidence. A straight handled copper frying-pan from Mohenjo-daro has its exact counterpart at Altin Depe<sup>9</sup>, (Fig. 40.16). Segmented faience beads have been noticed in every Indus sites.<sup>10</sup>. Similar beads have also been reported from Altin Depe, Anau and other places in South Turkmenia (Figs. 40.32, 33). A hairpin<sup>11</sup>, with a double spiral head (Fig. 40.13), discovered at Chanhudaro, resembles the pins found on the island of the Aegean seas, as also in the early Asiatic settlements, especially at Anau and Altin Depe<sup>12</sup>.

Rectangular ivory sticks, used as dice, were common to India and Turkmenia. Concentric circles are marked on the specimens discovered at both the sites<sup>13</sup>. It may, however, be noted that on the Indian specimens four parallel lines are engraved while on the Turkmenian examples they are only two<sup>14</sup>, (Fig. 40.21). Thick

1. Durrani, *op. cit.*
2. Gupta and Schetenko, "New Evidence of the Harappa Culture in the Soviet Central Asia" *Bharati*, Nos. X and XI, 1966-68, p. 195.
3. *Ibid.*
4. *Ibid*
5. *Ibid.*
6. *Ibid.*
7. *Ibid.*
8. *Ibid.*
9. *Ibid.*
10. Wheeler, *Indus Civilization*, p. 74, also *Civilization of the Indus Valley and Beyond*, p. 52.
11. Gupta and Schetenko, *op. cit.*, 1966-68, p. 194.
12. Gupta, "Prehistoric Indian Cultures in Soviet Central Asia", *ICWTC*, pp. 246-248. Also, Piggott and *op. cit.* In Central Asia, they might have come from Iran.
13. Gupta and Schetenko, *op. cit.*, p. 195.
14. *Ibid.*

rectangular and square ivory pieces in both the regions are also similar in form and conception (Fig. 40.22). They consist of rows of concentric circles in the centre and oblique parallel lines along the corners<sup>1</sup>.

An evidence of culture-contact between the Indus Valley and Central Asia has been provided by the discovery of a silver seal at Altin Depe<sup>2</sup>, (Fig. 40.36). This motif on the seal seems to be a combination of different animals. In the centre of this seal is a figure of a tiger with the twisted tail, two legs and one beaked head. Across the neck is an elongated double head of an animal (probably of tiger). All the three heads do not seem to form part of the central figure physically (Fig. 40.36). This pattern bears a close resemblance with a seal from Mohenjo-daro showing a horned bull with two heads of the other animals, probably one unicorn and one stag (Fig. 40.37). It appears that the difference in the shape of the curious animal figures depicted on the two seals is due to different mythological and religious belief<sup>3</sup>. But what is interesting is the mode of depiction of complex ideas which is identical in both the examples.

To conclude, it may be mentioned that since the excavations of Harappa and Mohenjo-daro scholars have tried to find out rightly or wrongly, every bit of material evidence which may throw light on Indus-West Asian cultural and commercial contacts but except for a very few specific items of seals, beads, etc., we have nothing very tangible to establish it. It is only at Tell Asmar that the largest number of objects of different kinds of the Harappan origin or Harappan type have been found (Pl. XIV). At other places, Harappan objects have been found only sporadically. A. Parpola in a personal conversation has recently told us that a cuneiform tablet has been read which mentions the existence of a colony of the Meluhhan merchants at Lagash in Mesopotamia. If finally we accept the identification of Meluhha with Harappan India it is a very good evidence to establish the Indo-West Asian contacts. Since work in this direction is continuing in different universities and institutes of higher learning no final word is called for. Here we have only tried to collect all that has been said on the issue in a more systematic manner than hitherto, we have not made wild guesses.

1. Gupta and Schetenko, *op. cit.*, p. 196.

2. *Ibid.*

3. *Ibid.*

## THE PERIOD OF THE NEOLITHIC AND NON-HARAPPAN CHALCOLITHIC CULTURES

India's earliest civilization as epitomized in the Harappa Culture was somehow confined to Sind, Punjab, Gujarat and parts of Rajasthan, Haryana and Uttar Pradesh. The rest of the country simultaneously witnessed the growth of a number of regional cultures basically belonging to the Neolithic and Chalcolithic complexes which had limited although meaningful commercial or cultural contacts not only with the Harappa Culture but also with some West Asiatic cultures. Besides these Cultures, contemporary with the Harappa culture, there were several other Neolithic and Chalcolithic Cultures of the post-Harappan period which too happened to maintain some contacts with the West Asian Cultures (Fig. 66).

Amongst the cultures contemporary with the Harappa Culture the most prominent was the Neolithic Culture of South India flourishing in Karnataka, Andhra Pradesh, and parts of Tamil Nadu and it is dated to the period between 2400 B.C. and 2000 B.C. There were also some Neolithic-Chalcolithic Cultures in other parts of the country which were late-contemporary of the Harappa Culture. The most important of these cultures were the Kayatha Culture, discovered in Central India near Ujjain (2100 B.C.—1800 B.C.), and the Ahar Culture identified in the Banas Valley of Rajasthan (2000 B.C.—1600 B.C.). Amongst the Cultures succeeding the Harappa Culture, the Malwa Culture is located in the Narmda-Tapti Valley (1600 B.C.—1300 B.C.), the earliest phase of the Swat Valley Culture flourishing in the Gandhara region (1500 B.C.—1000 B.C.), Jorwe Culture spread over most of the Deccan (1300 B.C.—1000 B.C.) and Ochre Coloured Pottery Culture and the Copper Hoards identified in Western U.P., Haryana and Rajasthan (*circa* 2000 B.C.—1000 B.C.). There were a few other Chalcolithic Cultures in eastern U.P., Bihar and Bengal which have been broadly dated between 1600 B.C.—800 B.C., such as the Chirand-Sonepur Culture and Pandu-Rajar-Dhibi Culture. In the Indus Valley there was the Jhukar Culture dated to 1800—1500 B.C. or later. The O.C.P. Culture was succeeded by painted Grey Ware Culture in Haryana, parts of Rajasthan, Uttar Pradesh and Madhya Pradesh and it was, to begin with, a copper-using culture, as

is evidenced at Hastinapur in U.P. and Sardargarh in Rajasthan<sup>1</sup> (Fig. 53).

In the frame-work of the present study not all cultures are relevant (since we do not have the evidence of any kind of relationship between each one of them and the cultures existing outside India), e.g., the Kayatha Culture, and Prabhas Culture. We shall, therefore, be confining ourselves to the study of those cultures which have some bearing on India's contacts with other countries.

### **Neolithic Cultures**

The Neolithic Cultures of India may be divided into four groups<sup>2</sup> on grounds of regional peculiarities (Fig. 44). These are as follows :

(A) *Eastern Group*. It includes sites located in north-eastern India, Bengal, Orissa and Bihar. The stone tools of this group exhibit India's contact with China and Burma as well as South-east Asia (Figs. 45, 46, 47 and 48).

(B) *Southern Group*. It includes sites located in Karnataka, Andhra, Pradesh, Tamil Nadu, as well as in several regions of Central India. According to a particular analysis, the Burnished Grey Ware of this group is likely to have been derived from West Asia.

(C) *Northern Group*. It includes sites located in the Kashmir Valley. The pattern of life as evidenced here clearly shows India's contacts with Central China (Pl. XV, a, b, c respectively).

(D) *North-Western Group*. It includes sites in Baluchistan, Sind and the Punjab. The stone implements show similarities with those found in Iran and Central Asia (Pl. XVI a and b).

#### **A. Eastern Group**

*North-Eastern Districts* : The Neolithic Culture of eastern India is evidenced mainly in hundreds of stone tools discovered from time to time, during the last more than a hundred years, in Assam, Meghalaya, Nagaland, Manipur, Bengal, Bihar, Orissa and Chhota Nagpur. There have been only three small-scale excavations—Kuchai in Orissa, Deojali Hading in Assam, and Chirand in Bihar, which in addition to stone tools, have yielded bone tools and pottery. The stone tools include ground, pecked and polished flat celts, tanged celts, quadrangular axes, adzes, splayed axes, chisels,

1. For the chronological brackets of all these cultures see Agrawal, *The Copper Bronze Age in India*, pp. 63-102.

2. Krishnaswami, "Neolithic Pattern in India", *AI*, No. 16, pp. 25-64. Krishnaswami has, however, called them 'Provinces'. Within the Neolithic he includes what is now called Chalcolithic cultures of the Deccan and Western India. Allchins have, on the other hand, used the blanket term 'Neolithic-Chalcolithic'. Our grouping suggested here is slightly different from all the above quoted schemes. Allchin and Allchin, *op. cit.*, pp. 157-178.

edge-ground tools, hammers, grinding tools, and scrapers. Most of these tools are of rectangular cross-section. The materials used include jadeite, dolerite, phyllite greenstone, and slate, sandstone and shale like sedimentary rocks. Jadeite, it may be mentioned, does not occur in this region; its mines are located in Upper Burma and near Yunnan in south-west China. Greenstone is, however, a very fine-grained rock, olive green in colour, found locally as pebbles in the river beds. Other rocks are found in different areas of north-east India and north-west Burma. Obviously, crossing the present-day political boundaries, the neolithic people formed a culture-area of their own sharing not only the above mentioned raw materials but also each others' tool-typology and technology. China, India and Burma shared many common denominators, which may be enumerated as follows.

Thus, in the Brahmaputra Valley, at Goalpara<sup>1</sup>, a large number of heavy tools, mostly of dolerite, with broad butt-end and rectangular cross-section, and fully polished have been collected which exhibit over-all similarity with the axes found at Pan Shan, in north-west China, of the 2nd millennium B.C. According to Anderson, the Pan Shan axes occupy an intermediate position between the square-cut 'Honan axe' and the 'Northern rounded axe' of north China<sup>2</sup>.

In the Khasi Hills<sup>3</sup> half-a-dozen fully ground and polished shouldered celts have been found. This is a variety of tools which is typically south-east Asian. Ethnically and linguistically, it may be pertinent to mention in this connection, the Khasis belong to the Tibeto-Burman and Mon-Khmer groups, respectively. Possibilities of cultural and biological relations between the Khasi Hills and south-east Asia have been rated very high.

Lakhimpur District<sup>4</sup> is the gateway to Assam from the Burmese side. Some two dozen tanged celts, quadrangular axes, chisels, etc., of jadeite, shale and sandstone have been found here. They have clear affinities with the Burmese types of tools. Tools of this category have come from the Lohit District<sup>5</sup> also and at least six examples of jadeite tools from this region appear to have been imports from Upper Burma, as their material would clearly show.

1. Goswami, and Bhagabati, "A Preliminary Report on a collection from Neolithic tools types from Western Assam", *Man in India*, Vol. 39, 1959, pp. 312-24. The first attempt to bring order into the stray finds neolithic in India, was made by Worman, "The Neolithic Problem in the Prehistory of India", *JWAS*, Vol. XXXIX No. 6 (1949), pp. 181-201.
2. Anderson, "Researches into the Prehistory of the Chinese", *BMFEA*, Vol. 15, 1943, pp. 1-304; Krishnaswami in "Progress in Prehistory", *AI*, No 9, pp. 53-79, gave further details on this issue and reordered Worman's proposition.
3. Sharma, *Prehistoric Archaeology of Assam (A Study of Neolithic Cultures)*, unpublished Ph.D. thesis, London University, 1966. Copy with the author, p. 277 (courtesy acknowledged). Sharma re-evaluated the work done by Dani in his Ph. D. thesis *Prehistory and Protohistory of Eastern India*.
4. *Ibid.*, p. 282.
5. Dani, *Prehistory and Protohistory of Eastern India*, pp. 60-62.

The excavations, conducted by Goswami and Sharma at Deojali Hading in the North Cachar Hills<sup>1</sup>, yielded handmade plain as well as cord-impressed red ware sherds, nearly 200 edged tools, grinding stones, querns, mullers, oval, triangular and quadrangular axes, tanged celts, etc. while the few plain brick-red pot-sherds discovered here it has been suggested, came from the Szechwan region of China, the cord-impressed pottery came from East Asia. Sankalia feels that the 'Assam Neolithic' primarily drew its inspiration from south-west China and Indo-China, and the Deojali Hading assemblage was comparable with the Late Bacsonian of south-east Asia. The major role was played by the Upper Yangtze Valley of Szechwan and Yunnan in developing the Neolithic Cultures of Assam. "The pecked and edge-ground axes of Naga Hills compare well with the excavated specimens from Yang Shao Taun in Honan, North China. The Pecking technique seems to have been introduced in this region from China whence also came the jadeite axes"<sup>2</sup>. Further, Sharma has pointed out that the shouldered axes were not derived from the Shang bronze axes, as sometimes made out, instead they have affinity with the Hoabinhian where the prototype was a natural tanged pebble<sup>3</sup>. It may, however, be pointed out that most of these theories are based upon explored material of tools collected out-of-context as far as other cultural items are concerned. Obviously, while these guesses have some validity in the framework of 'trait infiltration or migration' from one or two generalized culture-areas, it is practically impossible to be specific about the actual place of origin of these tools, the route of migration, the mechanism involved in the process of migration, etc. At the present state of our knowledge, we can only say that south China and south-east Asia both appear to have played important part in sending the proto-types of tools like splayed axes, rectangular or faceted axes, tanged axes, shouldered celts, wedge blades, and grooved hammers into the eastern region of India.

To summarize, (i) tools from Sadiya Frontier were largely made of jadeite, and their main types show affinity with ground tools from Upper Burma and Yunnan, the nearest source of jadeite, (ii) tools from Naga Hills were mainly made of gneiss and include some distinctive types, such as gouge-adze found abundantly in Burma, Malaya, Siam, Laos and Cambodia. These were found along with tanged axes and the wedge-blades which are special to this region, and (iii) tools from Khasi, Garo and Cachar Hills include particular types of rectangular tools typical of Upper Burma.

1. Goswami, and Sharma, "Report on the Investigation into Prehistoric Archaeology of North Cachar Hills, Assam", *JUG*, Vol. XIII, 2, pp. 63-66. Sankalia summarized the results in his *Prehistory and Protohistory of India and Pakistan* (1974), pp. 295-97.
2. Sankalia, *op. cit.*, p. 297.
3. Sharma, *op. cit.*, p. 400. For a detailed study on relationship, see also Krishnaswami, *op.cit.*, pp. 59-63.

*Orissa:* The neolithic complex of Orissa is slightly different from the neolithic complex of Assam and other regions in north-east region. Thus, although rectangular axes have been reported from several sites, shouldered axes are only rarely found. The main types include chisels and bar-cefts of Malayan type. Excavations, conducted by Ghosh at Kuchai in Mayurbhanj<sup>1</sup>, has yielded a coarse grit tempered red ware both handmade and wheelmade, sometimes also slipped and showing incised or finger-tip decoration, along with polished stone tools, such as rounded butt axes, faceted hoes, chisels, pounders, grinding stones and mace-heads. Only one shouldered axe was reported and that too from the surface. Similar assemblages seem to have existed at Baidapur (District Mayurbhanj), Kiching, Kurkutie Sini (District Singhbhum), and other places, but not excavated as yet. At the present state of our knowledge, therefore, the most that can be said is that the process underlying the cultural contacts of north-east India with south-east Asia extended Orissa also as the stone-tool typology shows, but no judgement can be passed on the problem of total culture-complexes since the Kuchai pottery is different from the Deojali Hading pottery.

*West Bengal:* West Bengal falls between Assam and Orissa and the natural conclusion should be that it also had cultural contacts with south-east Asia during the Neolithic Period. There have been a number of excavations in this State, Pandu-Rajar-Dhibi, Mahisadal, Nanur, Haripur, are only a few of them, but the stone tools, recovered from them, do not come exclusively from a level which may be termed as pre-metallic neolithic; they are, in fact, chalcolithic. We have, therefore, to depend on polished stone-tools termed as surface collections in districts like Midnapur, Burdwan, Bankura, Birbhum, Purulia, etc.<sup>2</sup> Some intensive work has been done by Sen and Ghosh in the Ajay and Kunoor Valleys<sup>3</sup>. The stone tools mainly include ring-stones, triangular axes, celts with rounded butt, etc., axes with rectangular section and shouldered axes are extremely rare. Obviously, at the present state of our knowledge we can at best say that Neolithic West Bengal was only incidentally related with south-east Asia. During the Chalcolithic period, as evidenced at Pandu-Rajar-Dhibi<sup>4</sup> and Mahisadal<sup>5</sup>, West Bengal seems to have maintained closer contacts with the Chalcolithic Deccan and Bihar, as Sankalia has rightly pointed out, than

1. Quoted by Thapar, "Neolithic Problem in India", *Indian Prehistory* : 1964, pp. 91-92. Also Ghosh, "On the Neolithic Pottery of Eastern India", *JOI*, Vol. XIX, 1969-70, pp. 333-339.
2. Sankalia, *op. cit.*, pp. 308-12.
3. Ghosh, *The Stone Age Cultures of West Bengal*, (unpublished Ph. D. Thesis, courtesy acknowledged).
4. Das Gupta, "The Excavations at Pandu-Rajar-Dhibi," *Bulletin of the Directorate of Archaeology*, West Bengal, No. 2.
5. *IAR*, 1963-64, p. 59.

with South-east Asia<sup>1</sup>. However, the excavator of Pandu-Rajar-Dhibi, Das Gupta, claims to have discovered a clay seal with some symbols which, according to him, are Cretan, implying thereby contacts<sup>2</sup>, between India and Crete. Unfortunately, the symbols are not clear enough to fully substantiate his theory.

**Bihar :** Bihar's situation has been slightly different from that of Bengal, Assam and Orissa. Older explorations<sup>3</sup> yielded stone axes, pounders, hammers, etc. of which only a few were of rectangular cross-section, suggesting, at best, Bihar's contact with South-East Asia *indirectly* through Assam. The recent excavations at Chirand, in District Saran, Uriup in District Bhagalpur, Sonpur in District Gaya and a few other places have brought to light the existence of a wide-spread Chalcolithic Culture, as also a preceding culture, called Neolithic, which is characterized by a large number of bone and antler ground and polished tools, such as picks, chisels, hammers, bar celts, shaft straightners, scrapers, needles, awls, and shovels<sup>4</sup>. In numbers it might compare with those found at Burzahom in Kashmir Valley but in techno-typological aspect the two assemblages do differ widely. At present there is no specific area within India with which it may be generically related. How far China played a part in this field is a matter of archaeological researches based upon future excavations; at the moment we are only hinting at a possibility purely as a hypothesis.

## B. Southern Group

The neolithic complex of southern India is far better known to us than that of eastern India, mainly due to a large number of excavations conducted by the Deccan College and augmented by the excavations carried out by Allchin, Seshadri and Rao:<sup>5</sup> Hallur (Distt. Dharwar)<sup>6</sup>, Kodekal (Distt. Gulberga)<sup>7</sup>, Paiyampalli (Distt. North Arcot)<sup>8</sup>, Palavoy (Distt. Anantapur)<sup>9</sup>, Sangankallu (Distt. Bellary)<sup>10</sup>,

1. Sankalia, *op. cit.*, p. 312.

2. Das Gupta, *op. cit.*, p. 32.

3. Brown, *Catalogue of Prehistoric Antiquities in the Indian Museum*, Calcutta.

4. Verma, "Excavations at Chirand", *Puratattva*, No. 4 (1970-71), pp. 18-22. Also, Lala Aditya Narain, "The Neolithic Settlement at Chirand", *JBRS*, Vol. LVI, 1970, pp. 1-35.

5. Sankalia, *op. cit.*, pp. 513-545. These pages contain the summaries of the excavations mentioned herein.

6. Nagarajarao, *Protohistoric Cultures of Tungabhadra Valley—A Report on Hallur excavations*.

7. Paddayya, "Radiocarbon dates and the South Indian Neolithic Cultures", *Antiquity*, Vol. XLV, 1971, pp. 134-38.

8. Rao, *IAR*, 1967-68, pp. 28-30.

9. Reddi, *Pre-and Protohistory of south-west Andhra Pradesh*, (unpublished Ph. D. Thesis, Deccan College, Poona. Courtesy acknowledged).

10. Subbarao, *Stone Age Cultures of Bellary*, 1948.

T. Narsipur (Distt. Mysore)<sup>1</sup>, Tekkalkota (Distt. Bellary)<sup>2</sup>, Terdal (Distt. Bijapur)<sup>3</sup>, Utnur (Distt. Mehbubnagar)<sup>4</sup> and several other sites (which have also been dated by C-14 method) have yielded a large number of polished stone implements, such as pointed butt axes, chisels, picks, adzes, stone blade tools, such as plain long blades, crested ridge blades and microliths of geometric and non-geometric varieties; some bone tools such as picks, awls and chisels; a variety of pottery, including Burnished Grey Ware, sometimes with post-firing paintings in red ochre; gold ornaments, such as ear-rings, terracotta objects, such as head-rests, bull figurines and mother goddesses; shell and paste beads and other ornaments, etc.<sup>5</sup> According to Sankalia, both the *content* and the *form* of this culture came from west Asia in the process of colonization of the Deccan by the people of the Mediterranean Physical Type, sometimes also called Indo-Europoid which occurred during the later half of the 3rd millennium B.C. The specific items, on which his views<sup>6</sup> are based, are as follows:

(i) The 'physical types' as determined by anthropologists<sup>7</sup> working on the skeletal remains from the graves, show that the authors of this culture-complex show mixed features—the Vedic or Proto-Australoid as well as 'Mediterranean'. This can result only when peoples of two different stocks get mixed-up and inter-breed. In the present context it appears that the West Asian people, typified by Mediterranean types, got mixed-up with the autochthonous people of the Proto-Australoid type.

(ii) The stone blade-tools, particularly the crested-ridge blades, have a distinct affinity with the West Asian types<sup>8</sup>, (Pl. XVII a).

(iii) The polished stone axes appear at a very early date in West Asia, about 5000 B.C. or earlier at sites like Jarmo<sup>9</sup>.

(iv) The Burnished Grey Ware pots with handles, lugs, tubular and channelled spouts, lips, multiple legs, etc.<sup>10</sup>, have a distinct affinity with those wares which have been found at sites like Shah Tepe<sup>11</sup> in Iran, (Plate XVII b). To this list may be added goblets and multi-pinched bowls and carinated vessels.

1. Seshadri, *A Report of the Excavations at T. Narsipur*, 1971.
2. Nagaraj Rao, et al, *The Stone Age Hill Dwellers of Tekkalkota*, 1965.
3. Sundara, "A New Type of Neolithic Burial, Mysore State", *Puratattva*, No. 3 (1969-70), pp. 23-33.
4. Allchin, *Utnur Excavations*, 1961. Also *Neolithic Cattle keepers of South India*, 1963.
5. Sankalia, *op. cit.*, pp. 513-559. It is a good summary of work done so far.
6. *Ibid.*, p. 539.
7. Malhotra, in Nagaraj Rao et al, *The Stone Age Hill Dwellers of Tekkalkota*, pp. 109-164. Special reference on p. 158.
8. Subbarao, "The Chalcolithic Blade Industry of Maheshwar and a Note on the History of the Technique", *BDCRI*, Vol. 17, No. 2, pp. 126-147.
9. Beck, *Atlas of Mesopotamia*, 1962, pp. 41-42.
10. Sankalia, *op. cit.*, Figs. 221, 222, 225, 226.
11. Arne, *Excavations at Shah Tepe, Iran*, 1945.

(v) The bull and Mother goddess worship was an age-old practice in West Asia and Asia Minor, going back to 5000 B.C. at Catal Hüyük<sup>1</sup> and other places. The discovery, at Inamgaon<sup>2</sup>, of a bull together with a clay Mother Goddess (Pl. XVII c) (headless) recalls Catal Hüyük examples.

(vi) The practice of disposing of the dead in multiple pots within the dwellings<sup>3</sup> (Fig. 49) was also followed in West Asia in an earlier context<sup>4</sup> at places like Tepe Gawra.

(vii) Terracotta head-rests (Fig. 50), as discovered at T. Narsipur, Hammige, Hallur and Piklihal in the Kaveri and Krishna basins<sup>5</sup>, have formal (concave cross-bars) on hallow base and functional (head-rests for the dead body) similarity with those found in Egypt, (Pl. XVIII a) e.g., those made of ivory and lapis lazuli and placed in the grave of Tutankhamen, others are found from the pre-Dynastic times to the Roman period. In some African countries they are still in vogue<sup>6</sup>.

As against this, Krishnaswami maintains that the Neolithic Culture of South India is an indigenous culture<sup>7</sup>. He gets support from Dhavalikar<sup>8</sup> and Gupta<sup>9</sup> who maintain that the Burnished Grey Ware spouted and lipped pots appear to be purely indigenous since these are simple shapes and may occur in various parts of the world independently. Gupta does not agree with Allchin that this ware came from Shah Tepe because of time and space distance and the absence of typological identity<sup>10</sup>. The crested-ridge blades occurred in the Harappan context in large numbers and the technique could easily have come to the Deccan through this source. Bull and Mother Goddess worship also occurs independently in several agro-pastoral communities in the Orient<sup>11</sup>; Catal Hüyük example is too far removed in time and space to offer any connecting link between India and Asia Minor although the occurrence of the headless Mother Goddess in the Deccan is certainly unique.

1. Mellart, *Catal Hüyük*, 1967.
2. Sankalia, *op. cit.*, Figs, 186, 187 and 188; Dhavalikar, "A Prehistoric Deity of Western India", *Man*, Vol. 5, No. 1 (1970), p. 131 ff.
3. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, pp. 120-124.
4. *Ibid.*, pp. 320-21. Also James, *Prehistoric Religion*, 1954, p. 57.
5. Allchin, "Pottery Head-rests from Narasipur Sangam", in *Studies in Prehistory* (Eds. D. Sen and A. K. Ghosh), 1966, pp. 58-63.
6. Nagarajarao, "Ancient Links between India and Africa", *Sunday Standard*, Jan. 5, 1975, Magazine Section, p. 1.
7. Krishnaswami, *op. cit.*, p. 50. He writes, "the origin of the polished axe culture of the Karnataka should not be looked for in the Indus Valley or in West Asia and Iran as conjectured by Allchin".
8. Dhavaliker, "Development and Decline of the Deccan Chalcolithic", in (Eds. D.P. Agrawal and A. Ghosh) *Radiocarbon and Indian Archaeology*, 1973, pp. 138-47.
9. Gupta, *op. cit.*, p. 122.
10. *Ibid.*
11. Piggott, (Ed.) *The Dawn of Civilization*, 1961.

in proto-historic India and the inspiration of this form may come from some site in West Asia which is not so far known to us. The terracotta head-rests do not occur in Mesopotamia, Asia Minor, Iran and Pakistan to substantiate the theory of Nagarajarao and Sankalia. They have suggested sea-route for Indo-Egyptian contacts but they have not been able to substantiate their surmise. As far as the racial affinities are concerned, the less said the better. The Mediterranean element was present in the Indus population<sup>1</sup> and it is possible that it came much earlier in the pre-Harappan times from Baluchistan.

Obviously, the question of India's cultural and biological contacts with West Asia, Asia Minor and Egypt during the Neolithic Period and pertaining to south India is still open. Some more archaeological work is essential before any thing final can be said on this issue. However, some glimpses are there, and some possibilities do exist, hence this review.

### C. Northern Group

*Kashmir Valley:* The Neolithic Culture of the Kashmir Valley appears to have been a unique creation of the people of the region with some inspiration from China and some from West Asia. Our knowledge of this culture is almost exclusively based on the excavated remains from Burzahom<sup>2</sup> and explored polished axes from Nunar. The antiquities include polished stone axes with pointed and rounded butt, wedges, chisels, adzes, hoes, picks, ring-stones, harvesters, etc., burnished gray ware pots, some of which were found with mat impression at the base, bone tools, such as needles, harpoons, points, scrapers and arrowheads. The people lived in pit-dwellings and buried in pits ceremonially not only their dead but also dogs and wolves<sup>3</sup>. At one stage, they used copper arrow-heads with double tangs and also a globular vessel of a fine red ware with parallel grooves on the belly and a large painting of a bucranian bull-head in black<sup>4</sup>.

It has been pointed out by several authors that nearer home pit-dwellings are typical of the loessic regions of Ordos, Central China and Yunan, and their occurrence in Kashmir Valley must be attributed to the Chinese influence. The rectangular harvesters (Sankalia<sup>5</sup> calls them pendants) of stone and bone with two holes along one of the longitudinal sides are also typical of the Chinese neolithic and bronze age cultures. Since this type is not found anywhere in India, China must again be considered its source. The same observation has to be made with regard to the two

1. Roychoudhury, in Gupta, *op. cit.*, pp. 272 and 278-290.

2. Khazanchi, *IAR* (1960-61 to 1963-64); also Thapar, *op. cit.*; Sankalia, *op. cit.*, pp. 298-304.

3. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, pp. 87-90.

4. Sankalia, *op. cit.*, p. 303.

5. *Ibid.*, p. 302.

double tanged copper arrowheads<sup>1</sup>. Dog burial is also typical of Shilka Cave Culture of the Upper Amur, in fact dogs were till recently sacrificed and buried with their owners amongst the Gilyaks, Ulchis and Goldis of this region<sup>2</sup>. As far as the bucranian motif on a pot is concerned it came either from Hissar II or also nearer home from Kot Diji<sup>3</sup>. The polished stone tools may have come from West Asia where they are found in an earlier context<sup>4</sup>.

At the end it may also be pointed out that Chinese elements must have come through Central Asia as some of the polished stone tool types and grey pottery from Lou Lan show<sup>5</sup>.

*Baluchistan and Punjab* : Besides these somewhat homogenous groups, stray finds of polished stone axes have been reported from some sites in Baluchistan, Sind and Punjab, e.g., at Kechibeg, Loralai, Kile-Ghul-Mohammad (II), Harappa, Mohenjo-daro, Nal and near Attock opposite Shadhipur. At Uchali, west of Naushera in the Salt Range, Pakistan, microlithic tools were found alongwith hand-made pottery in association with a human burial. It may represent another facies of the Neolithic Culture<sup>6</sup>.

The axes are usually of pointed or rounded butt variety and their source may be West Asia, particularly Iran. This surmise is based on two considerations: firstly, geographically, Iran is nearest to this region; and secondly cultural contacts with Iran have been there continuously in preceding centuries, i.e., during the fourth and early third millennium B.C. It is difficult to be more precise than this since the finds have been only stray.

*Sub-Himalayan region* : At Ror, in Kangra, an assemblage of neolithic tools has been located by Mohapatra<sup>7</sup>. It includes polished stone axes with rounded butt, crescent shaped reapers, fluted cores, scrapers on blade-flakes and split pebbles, small pebble chopper-chopping tools, etc. The assemblage as a whole is slightly different from the other assemblages since it has the pebble tool element. Gupta<sup>8</sup> on this basis surmises that it was related to the Gissar (or Hissar) Neolithic Culture of the Pamir mountains, located in Tadzhikistan, USSR, which is dated to 3000 B.C. If the hypothesis is correct, at present there is hardly any other alternative to suggest,

1. Gupta, "Neolithic Finds from Lou-Lan : Origin and Extra-territorial Affinities", *Bharati*, Nos. X and XI (1966-68), pp. 187-188.
2. Allchin and Allchin, *Birth of Indian Civilization*, p. 160.
3. Sankalia, *op. cit.*, p. 303.
4. Beek, *op. cit.*
5. Gupta, *op. cit.*
6. Krishnaswami, "Neolithic Pattern of India", *AI*, No. 16, pp. 63.
7. Mohapatra, "Preliminary Report of the Exploration and Excavation of Stone Age sites in Eastern Punjab", *BDCRI*, No. 25, pp. 221-237.
8. Gupta, "The Mountainous Neolithic Cultures of Central Asia and Northern India", *The Anthropologist*, Vol. XIV, No. 2 (1967), pp. 126-136.

then this also establishes India's contacts with Russian Central Asia during the neolithic period.

### Ochre Coloured Pottery and Copper Hoard Culture

It is now generally held that between 2000 B.C. and 1000 B.C. a Copper Age Culture arose in the Ganga basin which is characterized by Ochre Coloured Pottery and tools and weapons of the so-called Copper Hoards. At one time it was held that the authors of the Copper Hoards were the Aryans who originated in the Caucasus—South Russia—West Iran region. According to Heine Geldern<sup>1</sup>, some of the implements are typologically similar to those found in the Koban Culture. In this connection a few stray finds of copper-bronze tools from different places in North Western India were mentioned. These are as follows:

- (i) a sword from Fort Munro in the Punjab (Fig. 51.1)
- (ii) a shaft-hole axe from Shahi Tump, as also one from Chanhudaro (Fig. 51.2)
- (iii) a trunion celt from Shalozan in the Kurram Valley (Fig. 51.3)
- (iv) a shaft-hole adze-axe from the latest levels of Mohenjo-daro (Fig. 51.4)
- (v) a socketed celt from Kurukshetra (Fig. 52).

The problem of their origin and authorship have been fully discussed by Lal<sup>2</sup>, Gupta<sup>3</sup>, and Gordon<sup>4</sup>, and all these authors have come to the conclusion that these tools do not belong to the Copper Hoards found in the mainland of India. However, all of them do concede that these objects are of the West Asiatic origin, except the socketed-axe from Kurukshetra which is similar to the examples found in China of the Shang Period. It has also been held that they represent the time of tribal upheaval in West Asia and the consequent migration of the people towards India. Indirectly, therefore, these examples do give us the evidence of India-West Asia contacts in the late-Harappan and post-Harappan chalcolithic times, i.e., during the later half of the 2nd millennium B.C. We are, of course, not at all clear about the socketed-axe from Kurukshetra since this is an absolutely isolated example of its kind.

Recently, Sankalia has touched upon the problem of Ochre Coloured Pottery found at Saipai, near Etawah, in association with some of the typical Copper Hoard tools, such as the harpoons. He has also considered a similar pottery found at Lal

1. Heine-Geldern, "The Coming of the Aryans and the End of the Harappa Civilization", *Man*, Vol. 56, pp. 136-140.
2. Lal, "Further Copper Hoards from the Gangetic Basin and a Review of the problem", *AI*, No. 7, pp. 20-39.
3. Gupta, "The Indian Copper Hoards, the problems of Homogeneity, Stages of Development, Origin, Authorship and Dating," *JBRs*, Vol. XLIX, pp. 147-66.
4. Gordon, *The Prehistoric Background of Indian Culture*, pp. 138-39.

Qila, and has come to the conclusion that types like "dishes and bowls with a stand, bowls and pots with a channel or tubular spout, and vessels—large or small—with strap or loop handles a rarity in a Hindu house even today, but can be traced to western contacts"<sup>1</sup>. Sankalia has not elaborated the point, but basically his surmise appears to be true, although there is one difficulty : the Copper Hoards tools, which were associated with this pottery at Saipai are considered indigenous, as explained above. We may have to assume, therefore, that the association of the Copper Hoards with the OCP at sites like Saipai is a local phenomenon. Probably, more excavations will be needed before something tangible can be said on this issue.

### Ahar Culture

Near the town of Udaipur, Rajasthan, lies the ancient mound of Ahar, the earliest levels of which have yielded a Copper Age Culture whose remains have been found at more than fifty sites in the Banas Valley, Gilund in Distt. Bhilwara being the most prominent of them. The archaeological remains include some highly characteristic pottery, beads, etc. (Fig. 53), which according to Sankalia, indicate the existence of a significant element of West Asian Complex<sup>2</sup>. The examples which are relevant to our study are as follows:

- (a) the hollow-stemmed bowl in grey ware is similar to those found at Tepe Hissar and Geoy Tepe;
- (b) the stepped dish-cum-bowl are similar to those found at Shah Tepe;
- (c) the animal headed handles of some earthen pots are similar to those found at Troy;
- (d) potting techniques and decorations, such as applique and punctured ornament, ribs along the shoulder and neck, grooved and incised designs are similar to those found on Shah Tepe pottery;
- (e) correspondence between 'the eight incised patterns on the terracotta beads or spindle whorls from Troy or Anatolia in general and the one with an incised pattern on a bead from Ahar and an identical one on bead from Anau'<sup>3</sup>. (Fig. 54). Sankalia further quotes 'another bead from Ahar with a punctured stag' which, according to him, 'remains unparalleled, unless we think of a similar but larger pattern on a grey ware from Tekkalkota. Nearer home, it shows only a very limited acquaintance with the Harappan, viz., in the stepped dish-on-stand in fine red or sepia ware'<sup>4</sup>.

1. Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974, p. 400.

2. Sankalia, et. el., *Excavations at Ahar*, p. 223.

3. Sankalia, *Prehistory and Protohistory of India and Pakistan* (1974), p. 418.

4. *Ibid.*

Sankalia has, therefore, pertinently remarked : "it would not be quite strange if some folk movement from Western Asia, starting in about 2000 B.C. had reached south-eastern Rajasthan"<sup>1</sup>.

Unfortunately, not many sites of this culture have been excavated, and our knowledge of external contacts of this culture is limited to these items, opinion on which may sometime differ also.

## CHALCOLITHIC CULTURES OF CENTRAL INDIA

### Malwa Culture

Excavations<sup>2</sup> at various sites located in the Chambal<sup>3</sup> and Narmada<sup>4</sup> systems (Figs. 55, 56) have helped us in sketching the life-history of the chalcolithic people of Central India and their relationship with West Asia. Geographically, the area is bounded by the excavated sites of Nagada in the north, Navdatoli in the south, Tripuri in the east and Manoti in the west. Amongst these Naydatoli<sup>5</sup> is the most important site from our point of view. The chalcolithic culture at the site has been dated to *circa* 1600—1000 B.C.<sup>6</sup> It comprises of plain and painted pottery, an advanced microlithic industry, polished stone axes, mace-heads, sling stones, querns, copper pins, celts and hooks and beads of semi-precious stones<sup>7</sup>.

A comparative study of the specific pot-shapes and painted designs on pottery from this site provides some clues of India's relationship with the outside world. The channel-spouted bowls (Pl. XVIII b) have been unearthed in a large number in different phases of Navdatoli<sup>8</sup>. They are, according to Sankalia, quite similar to some of the bowls of Iranian sites<sup>9</sup>. (Pl. XVIII c) Ismailabad, a site 80 km:

1. Sankalia, *et al.*, *Excavations at Ahar*, p. 223.
2. IAR, 1955-56, 1957-58, 1958-59, 1959-60, 1962-63, 1964-65.
3. Jawad and Jalod (both unexcavated), Manoti and Avra (Distt. Mandasor), Kayatha and Nagda (Distt. Ujjain), Besnagar (Distt. Vidisha), Eran (Distt. Sagar).
4. Maheshwar and Navdatoli (Distt. Nimar), Tripuri (Distt. Jabalpur).
5. Sankalia, *The Excavations at Maheshwar and Naydatoli*; also *Chalcolithic Navadatoli*.
6. Thapar, "Relationship of the Indian Chalcolithic Cultures with West Asia", *Indian Prehistory*: 1964, p. 162.
7. IAR, 1964-65, p. 34.
8. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations between 1700 B.C. 1200 B.C." *Artibus Asiae*, Vol. 26, 1963, p. 315; "Spouted Vessels from Navdatoli and Iran", *Antiquity*, XXIX, 1955, pp. 112-15; "Iranian Influence on Early Indo-Pakistan Cultures", in *Central Asia*, p. 68.
9. *Ibid.*, S. P. Gupta, however, is not inclined to accept this view. According to him, in spite of the outward resemblance there is basic difference between the Indian specimens and their Iranian counterparts. So they cannot be taken as Iranian import. The bowls from Sialk have longer channels and curved handles while the handles are absent and channels are not so long in the examples of Navdatoli. (Gupta, *Indian Prehistory* : 1964; p. 170).

north-west of Tehran, Sialk IV and VI, Hissar III C, Tepe Giyan, Shah Tepe and Catal Hüyük have types of bowls, almost similar to those from Navdatoli<sup>1</sup>. Recently, Mughal<sup>2</sup> has reported from Dabar Kot a 'pottery cup of pale-buff colour with a channel spout'. He has tried to compare it with the Hissar and Navdatoli examples which is absolutely premature since the two forms are different. According to Sankalia, the presence of channel-spouted bowls at Navdatoli is not accidental, they were made locally under the Iranian influence<sup>3</sup>. On the other hand, a vessel with a round hole and open spout has also been found at Navdatoli<sup>4</sup>, but none of the Iranian sites has yielded this type of vessels. However, it is quite frequently found in Crete<sup>5</sup> and prehistoric Egypt<sup>6</sup> and some sites in West Asia. It appears that these vessels do not show any definite proof of migration of people from a particular site of Western Asia but indicate that the idea of making this particular type of vessels came from that land.

The excavations at Navdatoli also yielded different types of goblets or pedestalled bowls (Fig. 57), sometimes called 'wine' or 'champagne' cups, from phases I to III. These bowls are the following types<sup>8</sup> : (i) unpainted shallow bowl with solid stem and flattish base, (ii) painted, shallow bowl with carinated sides and solid stem, (iii) deep bowl with turned painted sides, (iv) deep bowl with concavoconvex sides, (v) deep bowl with straight outgoing side, fully painted. These types of bowls or goblets (Fig. 59) have their counterparts at Sialk, Giyan, and Hissar<sup>9</sup> (Fig. 58). Round bowls, decorated with hollow

1. Sankalia, "Iranian Influence on Early Indo-Pakistani Culture", in *Central Asia*, p. 68.
2. Mughal, *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan*, p. 5. He also compares it with a few examples from Dashli I in north Afghanistan and Sapalli Tepe from Southern Uzbekistan.
3. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700-1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, pp. 316-17; "Iranian Influence on Early Indo-Pakistani Cultures", in *Central Asia*, p. 69.; Rao, "Excavations at Rangpur and other Explorations", *AI*, Vols. 18 and 19, 1962-63, p. 198.
4. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations between 1700-1200 B.C.", *Artibus Asiae*, Vol. 26, p. 317.
5. Evans, *The Palace of Minos at Knossos*, Vol. I, p. 82.
6. Gordon, "The Chronology of the third Cultural Period at Tepe Hissar", *Iraq*, Vol. 13, 1951, p. 43, fig. 1.
7. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations between 1700 B.C.-1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 317; "Iranian Influence on Early Indo-Pakistani Cultures" in *Central Asia*, pp. 54, 66; Thapar, "Relationship of the Indian Chalcolithic Cultures with West Asia", *Indian Prehistory* : 1964, p. 62.
8. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations between 1700-1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 317.
9. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations between 1700 B.C.-1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 317.

circles and filled with dots have also their parallels at Carchemish in the 'Champagne grave' strata<sup>1</sup> and in Crete (Pl. XIX a). A type of vessel of Navdatoli—the 'tea-pot' like bowl equally shows some similarity to the channel-shaped bowls of West Asia<sup>2</sup>. At Navdatoli has been found another type of pot with globular body, long, narrow neck and a broad flat rim, identified as lamp, and a similar vessel has been reported from Sialk<sup>3</sup>.

Some Kuja-shaped vessels have been found at Navdatoli, Nagda and Prakash<sup>4</sup>. Though the complete shape is still not clear, yet it seems to be a globular jar. This form, it may be noted, did not belong to Iran as it is conspicuous by its absence at Iranian sites. But as the shape seems to be typically non-Indian, it might be of West Asiatic origin<sup>5</sup>.

Some painted motifs on the Malwa Ware of Navdatoli also recall their parallels at Iranian sites. The depiction of animals such as the tiger, deer, antelope, with elongated legs and bodies was common to the potteries of Central Indian Chalcolithic sites and Iranian sites—especially of Hissar and Sialk<sup>6</sup> (Fig 60).

Some human figures painted on pottery of Central Indian Chalcolithic Cultures and that from some West Asian sites also give a similar look. Navdatoli white-slipped ware depicts a dancing human figure which is quite similar to the figures from Iran and Syria<sup>7</sup>. The two painted human figures from Navdatoli<sup>8</sup> can be very well compared with those painted on the vases from West Asia. The first (Fig. 61.8) was solitary human figure facing front. The head is represented by bisected hollow circles and the nose by a vertical stroke. The hair around the head is shown by short curved rays. The neck is elongated. The trunk is represented by two solid opposite triangles resting on their vertices. The upraised right arm may suggest that the figure is in dancing position. The features indicate that the figure is of a female and the lower triangle is meant to depict the skirt. For triangular torso and skirts, it can be compared with the figure<sup>9</sup> on a sherd from the middle chalcolithic level at Can Hasan, in Vilayat of Konya from Turkey (Fig.

1. Thapar, *op. cit.*, p. 162.

2. Sankalia, *Prehistory and Protohistory of India and Pakistan*, p. 199.

3. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700-1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 329.

4. *Ibid.*

5. *Ibid.*

6. Sankalia, "Iranian Influence on Early Indo-Pakistani Culture", in *Central Asia*, pp. 54-66.

7. *Ibid.*, p. 67.

8. IAR, 1957-58, Pl. XXXV; Nigam "Human motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, 1965-66, pp. 5-9. Pl. 1-12; "The Chalcolithic Dancers of India", *JBRs*, Vol. XLIX, 1963, pp. 103-104, Pl. II. 2.

9. Nigam, "The Chalcolithic Dancers of India", *JBRs*, Vol. XLIX, 1963, p. 104, (pl. 2.4).

61.10). Some Sialk sherds<sup>1</sup> are also characterized by the depiction of triangular upper torso. A few sherds with similar paintings from Nagda<sup>2</sup> (Figs. 61.1, 2) can be compared with some of the specimens from Sialk<sup>3</sup> (Figs. 61.11-13), Tell Halaf<sup>4</sup> (Fig. 61.14) and Can Hasan in Vilayat of Konya from Turkey<sup>5</sup> (Fig. 61.10.)

Another design, common to Navdatoli<sup>6</sup> (Figs. 61.3-9), Rana Ghundai (Fig. 61.15), Sialk<sup>7</sup> (Figs. 61.11-13), Tell Halaf<sup>8</sup> (Fig. 61.14), and Cheshmeh-Ali<sup>9</sup> near Tehran (Fig. 61.16) is the depiction of large nude human figures, holding each other's hands in solid black<sup>10</sup>. The flying hair of the dancing figures of Navdatoli remind us of similar style on the Samarra Ware<sup>11</sup>. On another vessel, a man with dishevelled hair and with a long spear-like object in his hand, was painted on the inside of the base. Its counterparts have been noticed at Sialk, Susa, Bakun and Musyan<sup>12</sup>. Thus, the animals and human figures painted on the pottery, found in Indian and Iranian sites, bear a close likeness to each other and we are led to infer that they had some contacts, directly or through some intermediary sites.

Apart from these, some geometrical designs<sup>13</sup> such as horizontal zig-zag lines, wavy lines; vertical straight lines, vertical wavy lines, slanting straight lines, slanting

1. Nigam, "Human Motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, pt. I, 1965-66, p. 9 (pls. II 6 and 7); Sankalia, "Navdatoli Dancers", *Antiquity*, Vol. XXIX (1955), p. 31, Figs. 2, 4, 12 and 14.
2. Nigam, "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, parts I and IV, 1963, p. 104. (Pl. 1.1).
3. *Ibid.*, p. 105 (Pls. 2, 7 and 8).
4. Cf. for details see Starr, *Indus Valley Painted Pottery*, pp. 32-33, figs. 22 and 23.
5. Nigam, "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, parts I and IV, 1963, p. 104 (Figs. 2-4)
6. Nigam, "Human Motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, pt. I, 1965-66, pp. 4-5, 10 (pls. I, 6-11 and pl. 11-1); "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, Pt. 1-4, p. 105 (pls. I, 6-10 and pl. II-1); Sankalia, "Navdatoli Dancers", *Antiquity*, Vol. XXIX (1955), p. 31
7. Nigam, "Human motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, Pt. 1, p. 10, (pls. II-6 and 7); "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, Pt. 1-4, p. 105 (pls. 2, 7 and 8).
8. Starr, *Indus Valley Painted Pottery*, pp. 32-33, Figs. 22 and 23; Nigam, "Human motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, p. 10, (pl. II, 11); "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, Pt. 1-4, p. 105 (pls. 2, 9, and 10).
9. Starr, *Indus Valley Painted Pottery*, pp. 31-32, (pl. 21); Nigam, "Human motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, p. 10, pl. (II-B); "The Chalcolithic Dancers of India", *JBRS*, Vol. XLIX, p. 105 (pls. 2, 12).
10. Sankalia, "Iranian Influence on Early Indo-Pakistani Culture", in *Central Asia*, p. 67.
11. Rao, "Excavations at Rangpur and other Explorations", *AI*, Vols. 18 and 19, 1962-63, p. 198.
12. Sankalia, "Iranian Influence on Early Indo-Pakistani Culture", in *Central Asia*, p. 69.
13. Ansari's comments on Thapar's article "Relationship of the Indian Chalcolithic Cultures with West Asia", *Indian Prehistory*: 1964, p. 164.

wavy lines, palm leaf, lattice, triangles, loops, diamonds, axe design, dots, circles, sigmas and plants are commonly found painted on Indian and Iranian pottery. Of course, since some of these motifs are too common and are met with on wares of different cultures of different countries and of different periods, all of them cannot be quoted in favour of Indo-West Asian contacts.

Only a single specimen from Navdatoli<sup>1</sup> shows the motif of a spiral but it was quite popular in Knossos<sup>2</sup> and Hissar<sup>3</sup>. A solitary sherd with punctured holes, covered with a white material has been found at Naydatoli<sup>4</sup>. This type of decoration is similar to the specimen of Minoan pottery from Crete<sup>5</sup>, (Pl. XIX a).

Weapons also suggest some link between Chalcolithic India and West Asia. A middle portion of a dagger with a raised mid-rib, found at Navdatoli III also seems to be of West Asiatic<sup>6</sup> inspiration if not origin<sup>7</sup>. According to Heine-Geldern, however, this technique was copied from the bronze daggers of the Koban culture in the Caucasus<sup>8</sup>.

All this evidence goes to show that the Malwa Chalcolithic Culture of Central India came under the influence of some of the contemporary West Asian cultures; most probably indirectly through some intermediary sites about which we have no clear evidence; it is possible that the Swat Valley sites of the Chalcolithic Culture, where the so-called 'champagne cups' (Fig. 62) have been found in a large number may have been some of those intermediary sites. However, one thing is clear : during the second millennium B.C. India's contacts were intimate more with Iran than Mesopotamia.

## CHALCOLITHIC CULTURE OF THE DECCAN AND SOUTH INDIA Jorwe Culture, etc.

Extensive explorations<sup>9</sup>, followed in some cases, by excavations, unveiled a

1. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B.C.—1200 B. C.", *Artibus Asiae*, Vol. 26, 1963, p. 320.
2. Evans, *The Palace of Minos at Knossos*, Vol. I, p. 109, fig. 76.
3. Schmidt, *Excavations at Tepe Hissar*, Damaghan, pl. LIV-V.
4. Sankalia, *op. cit.*, p. 320.
5. Evans, *The Palace of Minos at Knossos*, Vol. 1, p. 176; fig. 12c.
6. Sankalia, *op. cit.*, p. 329; Thapar, "Relationship of the Indian Chalcolithic Cultures with West Asia", *Indian Prehistory* : 1964, p. 162.
7. Gupta, "Indian Copper Hoards", *JBRS*, Vol. XLIX (1963), pp. 147-166. According to the view expressed in this article it is necessarily not so since spear heads from the latest levels of Mohenjo-daro and also those found in the Copper Hoards are with mid-ribs and they are contemporary with the Navadatolian Chalcolithic Culture,
8. Heine-Geldern, "Coming of Aryans and end of the Harappan Civilization", *Man*, Vol. 56, p. 137.
9. *IAR*, 1957-58, pp. 24, 66, 67; 1958-59, pp. 22, 24, 32, 67, 70; 1959-60, pp. 30, 31, 34, 38; 1961-62, pp. 32, 34; 1962-36, p. 15; 1964-65, pp. 48-57.

widespread culture, chalcolithic in nature, in the valleys of the Tapti<sup>1</sup>, Bhima<sup>2</sup>, Krishna,<sup>3</sup> Tungabhadra<sup>4</sup> and Kaveri<sup>5</sup>. The vast area comprises more than a hundred and sixty sites (Figs. 55, 56). Geographically the Deccan Chalcolithic Culture covers the area up to Prakash in the north, Hemmige in the south, Kesarpalli in the east and Nasik in the west. This culture can be put in the time-bracket of *circa* 1300—1000 B.C.<sup>6</sup> although at places like Inamgaon it comes down to 700 B.C. The dominant feature of this culture is the neolithic industry as signified by the polished stone axes and long lithic blades found at various sites in southern Deccan. Painted black-on-red pottery as well as Burnished Grey Ware is another significant feature of this complex. These people also have had some contacts with the contemporary cultures of West Asia as is evident from the similarities in certain material relics of these cultures, the similarity in the painted designs and motifs on pottery being the most marked.

At Daimabad, near Nevasa, a channel-spouted vessel was found. One specimen each of a pot with broad spout, has been found at Piklihal and at Tekkal-kota<sup>7</sup>. Such pot-types are rare in the Deccan Chalcolithic Cultures but, as said earlier, are very common in Sialk, Gyan and Hissar in Iran<sup>8</sup>. The similarity in the shape and design of vessels indicates some contacts directly or indirectly between the different peoples who used this type of vessels. In the Deccan, it might have come from Malwa, still, the ultimate source remains in West Asia. Another vessel, which has been found at Prakash preserved nicely, is the dish with looped feet<sup>9</sup>.

1. In the Tapti System—Prakash, Bahurupa, Sawalda, (all in District West Khandesh). Tekwada, Bahal (Both in East Khandesh).
2. In the Bhima System—Chandoli and Sonegaon, (District Poona).
3. In the Krishna System—Piklihal, Maski, (District Raichur), Hallur, (District Dharwar), Nagarjuna-Konda, (District Guntur), Kesarpalli, (District Vijayawada).
4. In the Tungabhadra System—Tekkalakota and Sangankallu (Both in District Bellary) Brahmagiri (District Chitaldurg).
5. In the Kaveri System—T. Narsipur, and Hemmige (both in District Mysore).
6. Thapar, "Relationship of the Indian Chalcolithic Cultures with West Asia"; *Indian Prehistory* : 1964, p. 162; Also, Sankalia, *Prehistory and Protohistory of India and Pakistan*, 1974, p. 477 ff.
7. Sankalia, "Iranian Influence on Early Indo-Pakistani Culture" in *Central Asia*, p. 54; "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B. C.—1200 B. C.", *Artibus Asiae*, Vol. 26, 1963, p. 315.
8. Sankalia, "Iranian Influence on Early Indo-Pakistani Cultures", in *Central Asia*, p. 54; "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B. C.—1200 B. C.", *Artibus Asiae*, Vol. 26, 1963, p. 315; Gilund (District Udaipur) and Navdatoli (Distt. Nimar) also yielded such types of pots.
9. Thapar, "Prakash 1955, A Chalcolithic Site in the Tapti Valley", *AI*, Nos. 20 and 21, 1964-65, p. 61.

(Fig. 63). This type of vessel in different shapes was quite popular in Palestine, Anatolia, the Amug plain, Mesopotamia and at Sialk in second millennium B.C.<sup>1</sup> The same type of dish can be seen at Harappa<sup>2</sup>, at Nuzi<sup>3</sup> and Sialk<sup>4</sup>. Another interesting pot-type, which has close parallels in Tepe Giyan<sup>5</sup>, is a three-legged bowl found at Chandoli<sup>6</sup> (Pl. XIX b) and Piklihal<sup>7</sup>. Some theriomorphic terracottas, which are a common feature in the prehistoric pottery of Western Asia, also indicate some link between these different cultures. A theriomorphic vessel in the form of a bull, found at Chandoli (Pl. XIX c)<sup>8</sup>, is quite similar to such type of pottery from Hissar and Sialk<sup>9</sup> (Pl. XIX d).

Deccan Chalcolithic Culture is typified in the Jorwe Ware, a typical black-on-red ware found at Jorwe, Nevasa, Inamgaon and other places. The ware includes certain types of vessels which too appear to have evolved from the West Asian prototypes, e.g., pots with almost perpendicular, long vertical tubular spout, globular or biconical carinated body with the sagger base, and constricted mouth having a high flaring rim<sup>10</sup> (Pl. XX a). Similarly there is also a close likeness in the motifs painted on the chalcolithic pottery from India and Iran. The depiction of stylized deer, antelope and tiger is rarely met with on the Harappan pottery, but have been commonly found on the chalcolithic pottery of Iran and Central India. Excavations at Daimabād yielded a very big fragment of a jar on which tiger (leopard ?) and deer (antelope) with hatched bodies are painted<sup>11</sup> in several horizontal friezes (Fig. 60). Similar depiction can be seen in the paintings on bowls, one each from Sialk, and Hissar<sup>12</sup>, (Fig. 58). The motif of a running animal, most probably dog, discovered on a few pots from Chandoli and Nevasa (Fig. 60) can be compared with the painted motifs on the pottery from Giyan and Bakun<sup>13</sup>. The design of geometric and

1. Thapar, "Prakash 1955, A Chalcolithic Site in the Tapti Valley", *AI*, Nos. 20 and 21, 1964-65, p. 61.

2. Vats, *Excavations at Harappa II*, pl. LXXI, p. 64.

3. Richard, Starr, "Nuzi Report on the Excavations at Yorgan Tepe near Kirkuk", *Iraq.*, pl. 92, quoted by Thapar in *op. cit.*, p. 61.

4. Thapar, "Prakash 1955, a Chalcolithic Site in the Tapti Valley", *AI*, Nos. 20 and 21, p. 61.

5. Contenau and Ghirshman, *Tepe Giyan*, pl. XII and XXV

6. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B.C.—1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 319.

7. Allchin, "Piklihal Excavations", *APGAS*, No. 1, 1960, p. 34.

8. *JAR*, 1960-61.

9. Sankalia's comments on Thapar's article "Relationship of the Indian Chalcolithic Cultures with West Asia", *Prehistory* : 1964, p. 167.

10. Sankalia, *Prehistory and Protohistory of India and Pakistan* (1974), pp. 495.

11. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B.C.—1200 B.C.", *Artibus Asiae*, Vol. 26, 1963, p. 320.

12. *JAR*, 1958-59, pl. XXII.

13. Sankalia, *op. cit.*, p. 320.

conventionalized 'tree of life' is found on a vessel from Daimabad<sup>1</sup> which resembles the design, painted on two terracotta plaques found in the temple at Nuzi<sup>2</sup>. Thus, it appears that some pots and some are motifs were common both among the Indians and the West Asian peoples, particularly the Iranians.

A few copper implements and other items reveal the same situation. From Nevasa comes a rectangular rod with a sharp double-sloped edge<sup>3</sup>. Such type of chisels have been reported from Egypt, Sumer and Susa, but are conspicuous by their absence in the Harappa Culture<sup>4</sup>. Conical, cylindrical and disc-shaped terracotta objects have been unearthed at Nasik<sup>5</sup>, and similar pottery cones are also to be seen at Jamdat Nasr in Mesopotamia<sup>6</sup>. A dagger with a faint mid-rib from Chandoli<sup>7</sup> may also suggest contacts with West Asia. The excavations at Tal-I-Bakun and Hissar (Fig. 64.1-3) brought to light statuette of mother goddess which resembles a female terracotta figure from Nevasa<sup>8</sup>, (Fig. 64, Fig. 4).

One terracotta cylinder seal from Maski (Pl. XX b)<sup>9</sup>, on which a man driving an elephant is depicted, resembles some Sumerian seals with similar representations<sup>10</sup>. According to Richard Barnett, it seems to be very much like the ones from Jamdat Nasr in Mesopotamia. It is not certain that it was manufactured there, but that it was made under Mesopotamian influence is undeniable<sup>11</sup>. Maski also yielded fourteen lapis lazuli beads and the fact that this material was not found in India<sup>12</sup>, suggests foreign contacts, particularly with Afghanistan, since its primary source nearer India lies in Badakshan.

At the end it may be pointed out that on the strength of the above mentioned details regarding close similarity between the material cultures of Central Indian Chalcolithic sites and those of Western Asia, it cannot be asserted that the people, who developed the Chalcolithic Cultures of the Deccan and South India, were immigrants from Iran. But that they borrowed the ideas seems to be undeniable.

1. Sankalia, "New Light on the Indo-Iranian or Western Asiatic Relations Between 1700 B. C.—1200 B. C.", *Artibus Asiae*, Vol. 26, fig. 19 (1969).
2. Sankalia, "Iranian Influence on Early Indo-Pakistani Cultures", in *Central Asia*, p. 69.
3. Sankalia and Others, *From History to Prehistory at Nevasa*, p. 417.
4. *Ibid.*
5. Sankalia and Deo, *Report on the Excavations at Nasik and Jorwe*, 1950-51, p. 106.
6. *Ibid.*
7. Thapar, "Relationship of the Indian Chalcolithic Culture with West Asia", *Indian Prehistory* : 1964, p. 162.
8. Sankalia, "Iranian Influence on Early Indo-Pakistani Cultures", in *Central Asia*, p. 70.
9. Thapar, "A Chalcolithic Site of the Southern Deccan", *AI*, No. 13, 1957, pp. 21-22.
10. *Ibid.*, p. 24.
11. *Ibid.*
12. *Ibid.*, p. 105.

## PAINTED GREY WARE CULTURE AND SWAT VALLEY CULTURE

### Painted Grey Ware

Archaeologists have brought to light a complex of pottery, known as Painted Grey Ware. The associated culture, named after its typical ceramic industry, is also important from our point of view. The culture belonged to the post-Harappan phase, also post O.C.P. and pre-N.B.P. phase as per stratigraphic evidence of the excavations at Rupar<sup>1</sup>, Alamgirpur<sup>2</sup>, and a few other sites. Different dates have been suggested for the period in which the Painted Grey Ware was in use. According to Lal<sup>3</sup>, the period can be placed between the time bracket of 1100—800 B.C., according to some other scholars, it cannot be done so. Wheeler<sup>4</sup> has suggested 800—500 B.C., and Gordon<sup>5</sup> placed it between 700 and 450 B.C. Some scholars<sup>6</sup> are inclined to believe that the beginning of this culture can be traced as far back as 1200 B.C. D.P. Agrawal<sup>7</sup>, after taking into consideration Carbon-14 dates, supports Wheeler and Gordon and places it into 800—400 B.C. bracket. Although the P.G. Ware is primarily a copper-age industry, the introduction of iron, at least in the later levels of this culture, has been brought to light by recent excavations at Hastinapur, Alamgirpur, Sravasti and Atranjikhera.

The distribution of this ware extends from Lakhayopir in West Pakistan across Bikaner to the Ganga plains with limited traces further south<sup>8</sup>. The remains of this ware have been unearthed at several sites<sup>9</sup> including the celebrated sites of Ahichchhatra<sup>10</sup>, Hastinapur<sup>11</sup> and Kausambi<sup>12</sup>.

1. *IAR*, 1953-54, p. 6 ; 1954-55, p. 9.
2. *IAR*, 1958-59, pp. 50-52.
3. Lal, "Excavations at Hastinapur and other Explorations in the Upper Ganga and Sutlej basin 1950-52", *AI*, Nos. 10-11, p. 23.
4. Wheeler, *Early India and Pakistan*, p. 28.
5. Gordon, *Prehistoric Background of Indian Culture*, p. 168.
6. Gaur, "Date of Painted Grey Ware", paper read at Aligarh Conference, Aug., 1968—quoted by Misra, *University of Allahabad Studies*, Vol. 2, (N. S.), No. 1, Jan., 1970, p. 17.
7. Agrawal, "The P. G. Ware : A Re-evaluation", *Paper submitted to the Aligarh Conference*, Aug. 1968. However, MASCA corrections to C-14 dates may take the date to 1100 B. C. originally proposed by Lal.
8. Banerjee, *Iron Age in India*, p. 240.
9. For a list of sites, see Lal, "Excavations at Hastinapur and other Explorations : in the Upper Ganga and Sutlej basin 1950-52", *AI*, Nos. 10-11, pp. 138-141. A good number of sites have been discovered since then.
10. The excavations have been carried out in 1940-44 at Ahichchhatra. Ghosh and Panigrahi, "Pottery of Ahichchhatra" (U. P.), *AI*, No. 1.
11. The site of Hastinapur has been excavated between the years 1949-52. Lal, "Excavations at Hastinapur and other Exploration in the Upper Ganga and Sutlej basin, 1950-52", *AI*, Nos. 10-11, pp. 5-102.
12. From 1953 onwards excavators at Kausambi, unearthed the remains of P. G. Ware. Sharma, *IAR*, 1953-54, 55, 56, 57, etc.

As the name itself indicates, it is a fine, thin, grey coloured ware with paintings done with assured brush and in black pigment<sup>1</sup>. The shapes of vessels include bowls and dishes with straight, convex, carinated, tapering, ledged or corrugated sides having round or sagger-base<sup>2</sup>. These pots were painted with several designs<sup>3</sup>, largely geometric, over the grey surface. (Fig. 65)

According to Lal, the Painted Grey Ware may be attributed to the Aryans<sup>4</sup>. Though it cannot be fully proved, at least in the context of the Early Aryans, yet the suggestion is plausible<sup>5</sup> in a slightly different context. Recently, Wheeler also propounded a similar theory, but with certain modifications. He is of the opinion that the credit of this ceramic industry must go to the second wave of the Aryans from the Punjab into the Ganga Plains<sup>6</sup>. As several of the sites, which yielded this pottery, find reference in the *Mahābhārata*, it has been suggested that probably the people who fought the battle of *Mahābhārata*, and who lived in the territory of the Kauravas used this pottery<sup>7</sup>. The discovery of the bones of horse, an animal so favourite with the Aryans from the Rigvedic times at Hastinapur was, considered as an additional evidence for ascribing the authorship of this culture to the Aryans. The animal does not seem to have been present in the Harappa Culture although recently A.K. Sharma has claimed to have discovered the bones of true horse (*Equus Caballus Linn*) at Surkotada and at Kalibangan also bones of true horse have been reported<sup>8</sup>. Similarly, the discovery of rice at Hastinapur<sup>9</sup> is also considered as significant evidence in favour of the theory; rice was not met with at the Harappan sites of Harappa and Mohenjo-daro; although it appears to have been cultivated at Lothal in Gujarat as Rao has mentioned<sup>10</sup>.

1. Lal "The Painted Grey Ware of the upper Gangetic Basin", *JRASB* (letters), Vol. XVI, No. 1, 1950, p. 90.
2. Lal, "Excavations at Hastinapur and other Exploration in the Upper Ganga and Sutlej Basin", *AI*, Nos. 10-11 p. 11.
3. *Ibid.*, These designs include svastika, various kinds of plain bands, groups of dots and dashes, wavy lines, concentric semi-circles, sigmas, concentric circles with radiating rows of lines and criss-cross hatched lozenges or diamond and spirals.
4. Lal, *op. cit.*, p. 151, cf. also Singh, "The Theory of the Aryan Association of the Painted Grey Ware : An Analysis", Paper read at the Seminar of *Painted Grey Ware Culture*, Aligarh 1968, p. 5 (Cyclostyled Copy).
5. Thapar, "The Aryans: A Reappraisal", *ICWTC*, pp. 156-57.
6. Wheeler, *Early India and Pakistan*, p. 28. Earlier he had expressed the view that the authors of the 'Cemetery H' Culture should be identified with the Aryans.
7. Lal, *op. cit.*, pp. 150-151.
8. *Ibid.*, p. 109, Sharma, "Evidence of Horse from the Harappan Settlement at Surkotada", *Puratattva*, No. 7, pp. 75-76. Sharma in Joshi's article "Exploration in Kutch and Excavation at Surkotada", *Jr. Oriental Inst.*, Vol. XXII, nos. 1-2 (1972), pp. 135-36.
9. Lal, *op. cit.*
10. Ghosh & Lal, "Plant Remains from Lothal" in Rao's article "Excavations at Rangpur and other Exploration in Gujarat", *AI*, Nos. 18-19, 1962-63, pp. 161-177.

If the view that the Aryans were the makers and users of the P.G. Ware is accepted another question arises : Did this industry evolve in India, or it was brought from outside ? On the basis of the Boghaz-Köi inscription in Asia Minor, it can be said that the peoples speaking the Aryan language (considered to be a branch of the Indo-European group of languages) were present in Western Asia in *circa* 14th century B.C.<sup>1</sup>. At some sites outside India, near-parallels of the Painted Grey Ware have been noticed. As Lal has pointed out, a ware similar to the P.G. Ware has been discovered by Wace at Tsani, Tsangli and Zerila in Thessaly<sup>2</sup> (Greece), and also at Shah Tepe in northern Iran<sup>3</sup>. The Greek specimens may suggest the presence of the Aryans in that region also although it is a far-fetched idea. A plain fine grey ware from Shah Tepe and a varient Painted Grey Ware from the south of lake Urmia in Iran<sup>4</sup> and Siestan<sup>5</sup> bear a close resemblance with the Hastinapur pottery. The discovery of this type of pottery in Siestan, south of lake Urmia, and at Shah Tepe, Tsani, Tsangli and Zerila may point to a route by which the authors of the P.G. Ware, probably different groups of the Aryans, came to India (Fig. 66). It can be presumed that a wide area of West Asia, and Southern Europe was under the impact of a similar culture. It may, however, be clearly understood that it is only a surmise and the resemblance may only be the case of parallelism<sup>6</sup>.

### Swat Valley Graves.

Recently A.H. Dani<sup>7</sup> has published the report of his excavations of a number of graves discovered by him in the Swat Valley, now in Pakistan. Earlier to this, for about a decade, a mission of the Italian archaeologists<sup>8</sup> had already discovered similar graves in the same region and they have also published their report in 1972. Both the reports conclusively prove the existence of a culture which Dani called 'Gandhara Grave Culture' but which is better called 'Swat Valley Culture'<sup>9</sup>. The total span of this culture has been placed between 1600 and 400 B.C., and divided into three periods; from bottom to top, Period I is dated to 1600—1300 B.C. ; Period II to 1200—

1. Lal, *op. cit.*, p. 147.
2. Wace and Thompson, *Prehistoric Thessaly* (Cambridge 1912), quoted by Lal, *op. cit.*, p. 147.
3. Arne, *Excavations at Shah Tepe, Iran*, pls. XIV 317-19 and XLVI 328, 338, etc. (1947).
4. Lal, *op. cit.*, p. 147.
5. *Ibid.*
6. Thapar, "The Aryans : A Reappraisal of the Problem", *ICWTC*, pp. 156-58.
7. Dani, "Timargarha and Gandhara Grave Culture", *AP*, Vol. III (The whole volume was devoted to the Report).
8. Stacul, "Discovery of four Pre-Buddhist Cemeteries] near Pacha in Buner (Swat, West, Pakistan)", *East and West*, Vol. XVII, p. 220 ff.
9. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, pp. 146-169.

1000 B.C., and Period III to 900—400 B.C. Period I & II belong to the Copper Age, while Period III belongs to the Iron Age. According to Dani, periods I and II represent the Rigvedic period and Period III represents the Mahābhārata Period<sup>1</sup>.

Periods I and II of the Swat Valley have yielded a large number of plain grey ware pots along with a number of dull red vessels (Fig. 62). It is this grey ware which has been associated by Dani with the Painted Grey Ware although not a single shape has any resemblance with the Painted Grey Ware. The ware, however, has clear affinity with those in contemporary Central Asia and Iran at sites like Hissar. It may, therefore, be seen that whatever may be the claim of Dani, there is hardly any valid ground to connect the Painted Grey Ware of the Indian main-land with the Plain Grey Ware of Swat Valley<sup>2</sup>.

The problem, however, does not end here. Even Lal associated the Painted Grey Ware, at least that discovered at sites like Hastinapur, only with the later Aryans, that is the Aryans of Mahābhārata period. He claimed the identity of the Early Aryans with the Painted Grey Ware people who lived in the Saraswati Valley and in this connection following suggestions of Dani may be quoted:

"There is a *priori* basis for equating the literary material of the *Rigveda* with those now brought forth from the Archaeological Excavations". He gives five points in favour of his theory: (1) the geographic scene of archaeology and history opens in the same region, that is in the north-western region, beyond the Indus, which is generally known as the Gandhara Region; (2) the chronological period of both refers to same time, that is, the middle of the second millennium B.C.; (3) the knowledge of copper or bronze technology is seen at this time. The word 'Ayasa' in the *Rigveda* definitely stands for a metal which, in all likelihood, is copper; (4) the methods of the disposal of the dead first by the 'extended method' and later by cremation and complete inhumation are also similar. The references in the *Rigveda* and *Atharvaveda* clearly show that the early Aryans practised these modes of disposal of the deads; (5) the literary evidence brings the Aryans from the western region. The archaeological evidence also connects the Gandhara Garve Culture with the plain grey ware culture of the west, that is, Northern Iran and Central Asia<sup>3</sup>.

### Jhukar Culture

The Jhukar Culture has been identified at the type site of Jhukar<sup>4</sup> and also at Chanhudaro<sup>5</sup>, Lohumjo-daro and a few sites on lake Manchhar. Mackay proposed

1. Davi, *op. cit.*

2. Gupta, *op. cit.*, pp. 168-69.

3. Dani, *op. cit.*, p. 52.

4. Jhukar mounds are situated in two distinct groups on the boundary line of the village of Mithodero, about six miles due west of Larkana. Majumdar, *Explorations in Sind, MASI* No. 48, 1934, p. 5.

5. Mackay, *Chanhudaro Excavations*, p. 103 ff.

that the probable date of this culture could be put around 1700 B.C<sup>1</sup>. With the evidence of Carbon 14 dating now available for the Harappa Culture, this culture, which is late Harappan according to the recent excavations conducted by Mugal<sup>2</sup> at Jhukar, should be dated to a slightly earlier date, round about 1800 B.C. The identity of the Jhukar people and their origin are still uncertain. However, they had fairly developed art and craft<sup>3</sup>. Pottery<sup>4</sup>, seals and a few other objects, unearthed at Jhukar, are similar to those excavated from certain sites in Western Asia. It has, however, to be borne in mind that the cultural similarities cannot, in many cases, be considered as definite evidence of contemporaneity. In fact, many of the objects, unearthed at Mesopotamian and Iranian sites and bearing some similarity with those from Jhukar, are definitely of an earlier date. This leads to the surmise that such common traits were bequeathed to the Jhukar people through some channels which at the present state of our knowledge cannot be determined precisely. However, from recent excavations at Jhukar by Mughal it is clear that most of the items which were earlier considered by Mackay and Piggott as West Asian or of Asia Minor origin, need not necessarily have been so. In any case, by way of reappraisal of the entire evidence, here we are putting together at one place all that has been quoted by earlier writers along with cautious notes wherever they are required.

The influence of different West Asian Cultures on Jhukar, which is likely to have been largely indirectly, can be noticed in the painted motifs on pottery. Some of these motifs were common to Jhukar, Sialk III and Hissar IB<sup>5</sup>. Ornamentation with flat overlapping pellets of clay has been found on a portion of a hand-made bowl<sup>6</sup>. This mode of decoration, however, seems to be an importation element although at the present state of our knowledge it is difficult to decide as to whence it was derived<sup>7</sup>. The Jhukar pots, both small and large, were decorated from inside and outside with plain and ornamental red bands<sup>8</sup>, (Fig. 67.1). Interestingly enough, similar features appear on pre-Harappan Amri pottery also, but they were not found

1. Mackay, *op. cit.*, p. 25.
2. Mughal, Personal Communication to Dr. S. P. Gupta, Shri Thapar and others.
3. Mackay, *op. cit.*, pp. 103-140. The material culture of the Jhukar people is characterised by flimsy houses made of matting walls on brick floors, stamp-seals, amulets, beads, metal tools and pins, bone awls and pottery.
4. *Ibid.*, p. 104. The pottery, a buff ware with painted decoration in black and red, included small footed jars, bottles, offering-stands and saucers. Mica and lime were commonly used as tampering materials. Paintings, glaze, incision and relief—these are the characteristics of the Jhukar pottery.
5. Banerjee, *Iron Age in India*, p. 87.
6. Mackay, *op. cit.*, p. 109, pl. XLVIII, No. 2.
7. *Ibid.*, p. 109, pl. XLVIII, No. 2.
8. *Ibid.*, p. 116, pl. XLI, 42, 50, XLV, 25-37, XLVI, 42, 45, XLVII, XLI 13, 19, 20, 24, 25.

on Harappan pottery<sup>1</sup>. This decoration also occurs on Jamdat Nasr wares of Sumer and the pottery of Tepe Ali Abad in Iran<sup>2</sup>. They were specially prominent on the pottery of the latter of the Tell-Halaf period. This similarity may show that there was some contact between the Mesopotamian and Iranian sites on the one hand and Jhukar<sup>3</sup> on the other.

As far as the animal motif is concerned, a species of goat (Fig. 67.2) from Jhukar in a purplish black paint on a light red base<sup>4</sup> is depicted on a broken dish. From the posture of the body it appears that the missing fore-legs were resting upon the plant device, shown in front of it, in the typical Sumerian manner<sup>5</sup>. This similarity suggests the acquaintance of the Jhukar people with the Sumarians. This motif is commonly repeated on Jhukar pottery together with other plant motifs. These plants have not yet been identified definitely, but they indicate an attempt to break away from convention and portray things in their natural form<sup>6</sup>. The same device, found on the sherds from Tepe Giyan and Tepe Sialk in north-western Iran, provide further evidence of inter-connection<sup>7</sup>.

Ball-and-stem motifs (Fig. 67.7) were peculiar to the Jhukar culture. A bud or seed vessel with a long stem is drawn in black-purple paint on the cream coloured surface<sup>8</sup> for the decoration of the dishes of food-stand. A single specimen of similar type has been found in southern Baluchistan also<sup>9</sup>. This device does not seem to have been popularly used by peoples in West Asia; a variation of it, however, appears to have been adopted to form part of a solar symbol on a Cretan seal<sup>10</sup>.

Different types of vessels of Jhukar pottery were ornamented with the chevron pattern<sup>11</sup> (Fig. 67.6) which was very rarely used in the Indus Valley, Sumer and Elam, except in Mesopotamia of the Jamdat Nasr period<sup>12</sup>. The same pattern can be noticed on the very early Tell-Halaf wares of north Assyria<sup>13</sup> and a slightly different one on a sherd from Zayak valley in southern Baluchistan<sup>14</sup>. The motif, however,

1. Mackay, *op. cit.*, p. 117; Also, Casal, *Fouilles d'Amri*.

2. *Mem. Del. en Perse* VIII, pl. VII, quoted by Mackay, *Chanhudaro Excavations* p. 117.

3. Mallowan & Rose, "Excavations at Tall Chagar Bazar", *Iraq*, Vol. III, pl. II, 4-6.

4. Mackay, *op. cit.*, p. 117, pl. XLV, 22.

5. *Ibid.*

6. Mackay, *op. cit.*, p. 118, pl. XLV, 19, 42.

7. Contenau et Ghirshman, *Fouilles de Tepe Giyan*, pl. 60; Ghirshman, *Fouilles de Sialk*, Vol. I, pls. LXII, LXIII, LXV, quoted by Mackay in *Chanhudaro Excavations*, p. 118.

8. Mackay, *op. cit.*, p. 119, pl. XLV, 25, 28, 30, 31, 35, 37.

9. Stein, *An Archaeological Tour in Gedrosia MASI*, No. 43, pl. III, (J. D. 2).

10. Evans, *Palace of Minos*, II, p. 218, fig. 123 (a).

11. Mackay, *op. cit.*, p. 119, pl. XLII, 4, 11, 15, 18 etc.

12. Frankfort, *Oriental Institute Communications*, No. 20, pl. VI.

13. Oppenheim, *Tell-Halaf*, pls. 1, 6, LII, 5, LIII 2.

14. Stein, *op. cit.*, p. 33, pl. I (ZNI).

is not only of a generalized kind but also the regions quoted here are widely apart both in time and space. Chequered pattern (Fig. 67.4), depicted in black and purplish paints on the red surface, and the small panels with crossed lines inside, were common to Jhukar<sup>1</sup> and Tell-Halaf pottery<sup>2</sup> but this motif was also of a simple and generalized kind. Further, several specimens of the former bear the motif of rhombs with incurved sides<sup>3</sup>. Its parallels occur on same painted vessels from Damin and Khurab in Iran Baluchistan<sup>4</sup>, and also on some vessels from Samarra<sup>5</sup>, Jamdat Nasr<sup>6</sup> and Nineveh<sup>7</sup>. A variation of this pattern (to fill in single and double horizontal borders), was also in practice in Al'Ubaid<sup>8</sup> and Tell-Halaf<sup>9</sup>. But the incurved sides are peculiar to the Jhukar culture<sup>10</sup> and are rarely met with in the pottery from Siestan<sup>11</sup>, Tell-Halaf and Al'Ubaid<sup>12</sup>. Another pattern, a six-sided rhomb, appears (on fragment of a large jar) in purplish black paint on a dark-red ground<sup>13</sup>. This device resembles the border pattern appearing on Tell-Halaf pottery<sup>14</sup>. The similar look of the rhomb patterns of Jhukar and Tell Halaf suggests that there was some relationship between these two cultures.

Spot decoration with its different forms occurs on several specimens at Jhukar. On some vessels spots of a multiple-loop pattern or single-loop pattern and on others three spot decoration were painted to form the border<sup>15</sup>. This design is also an important feature of Tell-Halaf and of Al'Ubaid pottery and of certain Iranian fabrics<sup>16</sup>. The Susian and Samarra wares present a similar look<sup>17</sup>. The neck of the jar, discovered from Tepe-Gawra, is decorated with a single row of large spots<sup>18</sup>.

1. Mackay, *op. cit.*, p. 120, pls. XLII, 25, XLVI, 1, 2, 4, 6, 7, 27, XLVII, 12, 8.
2. Oppenheim, *Tell-Halaf*, pl. II, 2.
3. Mackay, *op. cit.*, p. 120, pls. XLIV, 3, XLVI, 14, 15, <sup>2</sup>XXXIV, 24, XLIV, 2.
4. Stein, *Archaeological Reconnaissances in North Western India and South Eastern Iran*, pls. XI (A. 68), XIII (200), XXXIII (13).
5. Herzfeld, *Samarra V*, pls. XXXV, 221, XXXVI, 234, 923.
6. Mackay, "Report on Excavations at Jamdat Nasr (Iraq)", *Anthropology Memoirs*, Field Muesum, Chicago, Vol. I, pl. LXVIII, 2.
7. Thompson & Mallowan, *ILN*, 1931, p. 112, (a).
8. Woolley & Hall, *Ur Excavations*, Vol. I, *Al' Ubaid*, pl. XVIII (1769).
9. Mallowan & Rose, *Prehistoric Assyria*, figs. 71, 72; "Excavations at Tall Chagar Bazar", *Iraq*, Vol. III, fig. 22.
10. Mackay, *Chanh-Daro Excavations*, pp. 120-21, pl. XLVI, 12, 17.
11. Andrew, "a Neolithic Pottery in Siestan", *Burlington Magazine*, 1925, pl. 1, fig. 26.
12. Mallowan and Rose, "Excavations at Tall Chagar Bazar", *Iraq*, Vol. III, fig. 22.
13. Mackay, *op. cit.*, p. 127, pl. XLVII, 28.
14. Mallowan and Rose, *Prehistoric Assyria*, fig. 54 (4).
15. Mackay, *op. cit.*, p. 121, pls. XXXIV, 22, XLVI, 12, 17, XXXIX, 10, XLI, 38, XLII, 6, XLII, 13, XLI, 36.
16. *Ibid.*, p. 121.
17. Herzfeld, *Samarra V*, figs. 153, 161.
18. Speiser, *Excavations at Tepe--Gawra*, pl. LXVIII, 118.

Crescent-shaped motif (Fig. 67.3) was popular in the Jhukar Culture, mainly in the paintings on the dishes of the dish-on-stand<sup>1</sup> while it was rarely painted on wares found outside India. In the non-Indian context, the motif occurs on the base of a bowl of the Tell-Halaf period from Arpachiyah<sup>2</sup> and the group of five crescents on another from Ur belonging to the Al'Ubaid period<sup>3</sup>.

Two Jhukar sherds have a geometric decorative-pattern of triangles<sup>4</sup>. On some of the sherds the triangles are joined in a way that they give the generalized look of a butterfly<sup>5</sup>. It is interesting to note that similar designs can be seen on some Cretan wares<sup>6</sup> especially in the Early Minoan period. Triangles with concave sides occurring on the Jhukar pottery<sup>7</sup> (Fig.67.5) may also be seen on sherds from Siestan<sup>8</sup>. The six and four-armed cross like motif, painted on the centre of the dishes has, been taken to represent the sun<sup>9</sup>. The use of Maltese Cross can also be seen on the pottery of Jhukar<sup>10</sup>, Samarra<sup>11</sup>, Tell-Halaf<sup>12</sup>, the highland culture of Iran<sup>13</sup>, Susa and Musyan<sup>14</sup>, Ur<sup>15</sup>, Palestine<sup>16</sup>, and also on Kassite seals. The device also occurs on early wares from southern Iran<sup>17</sup>, Elam<sup>18</sup> and Baluchistan<sup>19</sup>. It seems that in north Syria lies the origin of this motif, and from this region it was taken to Mesopotamia and Iran in very early times, and later on it reached India via Siestan and Baluchistan<sup>20</sup>.

Cross-hatched bands were employed as decorative motifs for the margins of dishes in the Jhukar and Harappa cultures<sup>21</sup>. Tell-Halaf wares also have similar

1. Mackay, *op. cit.*, p. 122, pls. XXXIV, 18, XLVI, 4, 9, 11, 14, XLVI, 29, XLVII, 12, 16, 26, XLIV, 4, 10, 14.
2. Mallowan and Rose, *op. cit.*, fig. 69 (6).
3. Woolley and Hall, *Ur. Excavations*, Vol. I, *Al'Ubaid*, pl. XVII (1536).
4. Mackay *op. cit.*, p. 122, pl. XLIV, 18, 23.
5. *Ibid.*, p. 123, pls. XLVI, 9, XLVI, 7.
6. Evans, *Palace of Minos*, Vol. I, pp. 42-75, 166.
7. Mackay, *op. cit.*, p. 123, pls. XLIV 12, XLVI, 34, XLVI, 16, XLVI, 13.
8. Andrews, "Neolithic Pottery in Siestan", *Burlington Magazine*, 1925, pl. I, 44.
9. Mackay, *op. cit.*, p. 123, pls. XLIII, 7, XLIV, 6, 9, XLVIII 79; XLVII, 31.
10. *Ibid.*, pls. XLVI, 19, XLIV, 8.
11. Herzfeld, *Samarra*, V, figs. 23, 25, 27, 30, pl. XII, 24.
12. Mallowan and Rose, *op. cit.*, pls. XVIII, XXII, 10.
13. Herzfeld, *ILN*, 1929, p. 893, fig. 11.
14. *Mem Del En Perse*, VIII, figs. 175, 177, quoted by Mackay in *op. cit.*, p. 124.
15. Woolley and Hall, *op. cit.*, Vol. I, pl. XVI (1950-1952),
16. Petrie, *Ancient Gaza*, Vol. IV, pl. XXX, figs. 23-26.
17. Stein, "An Archaeological Tour in the Ancient Persia", *Iraq*, Vol. III, No. 2, pls. XIX, 2, XXI, 45, XXII, 43.
18. Andrews, *op. cit.*, 1925, pl. I., Nos. 34, 36.
19. Stein, "An Archaeological Tour in Gedrosia", *MASI*, 43, pls. XV, XVI.
20. Mackay, *op. cit.*, p. 124.
21. *Ibid.*, p. 125.

bands and borders filled in with vertical and horizontal hatching<sup>1</sup>. Bead motif was frequently used both in India and some other neighbouring countries as evidenced by the specimens of pottery found at Jhukar<sup>2</sup>, Lohumjo-daro<sup>3</sup>, Baluchistan<sup>4</sup>, Siestan<sup>5</sup>, Al'Ubaid<sup>6</sup> and Tell-Halaf<sup>7</sup>. We find the same motif roughly carved on the sherds from south-eastern Iran<sup>8</sup>.

A single specimen of hide motif is met with on the Jhukar pottery from Jhukar<sup>9</sup>, although it occurs on a large number of pot-sherds from Mohenjo-daro<sup>10</sup>. On a sherd from the former site, it is painted round the neck of a storage jar. An almost exact counterpart of this motif can be seen on an Elamite sherd<sup>11</sup>.

The figure of '8' motif (Fig. 67.14) appears on the sherd of a large jar from Jhukar mound<sup>12</sup>. In shape it is very close to the Minoan shield<sup>13</sup> and to the motif on the pictograph on Harappan seals<sup>14</sup>. This design was frequently used by the people of Tell-Halaf for the decoration of pottery<sup>15</sup>. According to Mallowan, it was derived from joined 'bucrania' motif which took the form of '8' in later period<sup>16</sup>. It is likely that it came to the artist through very devious channels from a remote past and he simply adopted it to suit his own purpose<sup>17</sup>.

Another decorative pattern, (Fig. 67.10), the groups of oblique lines in reverse directions, derived from the motif of zig-zag lines occasionally found on Jhukar vessels, is employed as a running border<sup>18</sup>. Some pottery fragments from Ur<sup>19</sup> reveal this design frequently, while those from Siestan, Baluchistan and south-eastern Iran only rarely<sup>20</sup>.

1. Mallowan and Rose, *op. cit.*, pls. XIII, XVIII, XIX, XX, figs. 55, 57.
2. Mackay, *op. cit.*, p. 124, pl. XLVII, 32.
3. Majumdar, "Explorations in Sind", *MASI*, No. 48, pl. XXII, 16.
4. Stein, "An Archaeological Tour in Waziristan and Baluchistan", *MASI*, No. 37, pl. XXI (S. 1. 23); No. 43, pl. XII (Sh. T. 11.5).
5. Andrews, *op. cit.*, 1925, pls. I, 23, II, 74.
6. Mackay, *op. cit.*, p. 124.
7. Mallowan and Rose, *op. cit.*, pls. XIII, XIV, XXIII, etc.
8. Stein, *Archaeological Reconnaissances in North Western India and South Eastern Iran*, pl. XIV.
9. Mackay, *op. cit.*, p. 125, pl. XLVI, 11.
10. Marshall, *op. cit.*, pl. XCII, 1-6.
11. *Mem. Del En Perse*, XX, p. 106, quoted by Mackay in *Chanhudaro Excavations*, p. 125.
12. Mackay *op. cit.*, p. 126, pl. XLV, 39.
13. *ASIAR*, 1924-25, pl. XXVIII, 9.
14. Majumdar, "Explorations in Sind", *MASI*, No. 48, pl. XVII.
15. Mallowan and Rose, *op. cit.*, pp. 154-163, figs. 74-75.
16. *Ibid.*
17. Mackay, *op. cit.*, p. 127.
18. *Ibid.*, pl. XLII, 22.
19. Woolley and Hall, *op. cit.*, vol. I, *Al'Ubaid*, pl. XIX (2012, 2025, 2168).
20. Stein, "An Archaeological Tour in Gedrosia", *MASI*, No. 43, pl. XXIV.

Not only pottery motifs but also pottery types suggest connections between Jhukar people and the people of Western Asia. The presence of food-stands has been noticed in both, Jhukar and Harappa Cultures<sup>1</sup>. Several cultures, in Egypt Mesopotamia, Asia Minor and Crete, present such types of food-stands which resemble their Indian counterparts in shape and painted motifs both<sup>2</sup>.

The footed vessels also seem to form an important link in such connections. A cup from Jhukar<sup>3</sup> (Fig. 67.13) with a rather high base and undecorated, is covered with bright pink slip, which has trickled in places over the foot. Similar chalice forms can be seen at several Harappan<sup>4</sup>, Mesopotamian and Assyrian sites<sup>5</sup>. Probably this type of vessel first came to Harappa via South-eastern Iran and Baluchistan<sup>6</sup>.

Two peculiar specimens of spouted vessels (Fig. 67.12) well made but without slip and having lost rims, have been found at Jhukar<sup>7</sup>. These are the only finds of this type which have been unearthed so far at this site. It appears that they might have been imported from some West Asian country, but from which country, is difficult to ascertain.

Besides pottery, several other objects, such as pins, buttons, seals, amulets and beads, also throw some light on Jhukar's contacts with the outside world. Thus, at Chanhudaro we have discovered copper pins (Figs. 67.8, 9) to fasten the garments. The same type of pins have been found at Anau in Turkmenia, at Tepe Hissar and some other sites in northern Iran, and even in Antolia and Greece<sup>8</sup>. Two copper pins<sup>9</sup> bearing chevron pattern, from Jhukar mounds are again similar to a pin found at Tepe Sialk IV<sup>10</sup>. The buttons from Jhukar and Mohenjo-daro are one inch in diameter and 0.2 inch thick and are of steatite. The same type of buttons were very common in the ancient world, and can be seen on many ancient sites from Iran to places as far as Western Europe<sup>11</sup>. In both the categories of objects, it is difficult to be specific regarding the site or sites from which Jhukar received the objects or the inspiration behind them but it is absolutely certain that Northern Iran was their source since there alone they were in popular use in the second millennium B.C.

1. Mackay, *op. cit.*, pp. 110-111.

2. See, Fleure and Peake in *Journ. Roy. Anthropol. Inst.* 1930, p. 52.

3. Mackay, *op. cit.*, p. 111, pl. XLI, 26, 27.

4. *Ibid.*, XXV, 44, 45.

5. Speiser, "The Pottery of Tell Billa", *Museum Journ. Univ. Philadelphia*, Vol. XXIII, p. 267.

6. Mackay *op. cit.*, p. 112.

7. *Ibid.*, p. 112, pl. XLI.

8. Childe, "India and the West before Derius," *Antiquity*, Vol. XVIII, p. 14.

9. Mackay, *op. cit.*, pl. LXXII, 18-22, p. 195.

10. Ghirshman, *Fouilles de Sialk*, Vol. I, pl. XCV, C. quoted by Mackay, *op. cit.*, p. 196.

11. Mackay, *op. cit.*, p. 197, pls. LXXVIII, 3, 7, 9, 12, 15, LXXXVIII, 5.

Some of the beads from Jhukar and Mesopotamian sites also bear close similarity and, therefore, may suggest commercial contacts between the two regions. Piggott mentions an ornamented stone bead discovered at Lohumjo-daro and informs us that the same type of beads have been discovered from Hissar III C and Anau III<sup>1</sup>. The long barrel segmented beads of Jhukar are similar to those from Jamdat Nasr of the Early Dynastic period<sup>2</sup> although they were there during the Harappan times and certainly came down from the Harappan sources.

Some of the seals (of Jhukar Culture), made of pottery, faience, stone and metal, also reveal evidence of some sort of commercial exchange between Jhukar and Sumer and Elam, and may be even with Anatolia<sup>3</sup> and Hittite Asia Minor<sup>4</sup> (although Harappan seals continued to be made side by side). Stamp seals are usually considered to belong to West Asiatic group<sup>5</sup>. The two couchant antelopes on a pottery seal from Jhukar have their parallels<sup>6</sup> in Elam. To Mackay, in the sketching of animals on Jhukar seals there seems to be a definite Elamite touch<sup>7</sup>. Another seal, ornamented by an interlaced coil pattern, bear similarity with the seal of the Hittites of Asia Minor<sup>8</sup>. According to Heine-Geldern, it appears to have been introduced by western immigrants, who had some relations with the Hittites<sup>9</sup> in their former homeland. A number of seals and double-sided amulets, resembling the Jhukar seals, have been found in Asia Minor<sup>10</sup>. Beads, pins, weapons and other metal artefacts and the seals and some pottery types and motifs bear witness to the arrival of some new people in this area. However, in the absence of any other contextual material at Jhukar from Asia Minor, the suggestion must remain absolutely tentative.

According to Mackay<sup>11</sup>, the entire Jhukar Culture-complex shows that there is a great similarity between it and the culture-complex of Tell-Halaf, and it is possible that the people of Tell-Halaf in course of their eastward migration reached Jhukar and a few other neighbouring sites or else the elements of their culture travelled to Jhukar indirectly through so far unknown intermediary sites. Mallowan<sup>12</sup>,

1. Piggott, *Prehistoric India*, p. 225.

2. *Ibid.*

3. Heine-Geldern, "Coming of Aryans and end of the Harappan Civilization", *Man*, Vol. 56, 1956, No. 151-52, p. 138.

4. Banerjee, *The Iron Age in India*, p. 88.

5. Piggott, *op. cit.*, pp. 223-24.

6. Mackay, *op. cit.*, p. 142, pl. XLIX, 10.

7. *Ibid.*

8. Piggott, *op. cit.*, p. 225.

9. Heine-Geldern, *op. cit.*,

10. Piggott, *op. cit.*, p. 225.

11. Mackay, *op. cit.*, p. 129.

12. Mallowan, *Prehistoric Assyria*, p. 129.

however, states that the Assyrians created the Tell-Halaf Culture, whose pottery first reached Baluchistan, and then from there to the Indus region, though he does not rule out other possibilities, such as Afghanistan (southern) playing an equally important role in the transmission. Both the suggestions merit our attention but only to the extent that they came from two foremost archaeologists, since these were made at a time when our knowledge about the Harappa Culture and the Jhukar Culture was very much limited, and the approach could not be too critical. In the light of recent studies, however, it may be stated that Jhukar India had some definite contacts with the second millennium B.C. West Asia but in order to work out the details we have to excavate more Jhukar sites.

The Jhangar Culture, found at Chanhudaro, was an independent post-Jhukar Culture. Its grey ware has only a general similarity with the north Iranian grey ware such as those found at Shah Tepe; no specific example of contact can be visualized at this stage since very little work has been done on this culture.

### Cemetery H—Culture

A different culture was revealed in 'Cemetery H' at Harappa, excavated by Vats<sup>1</sup>, Shastri<sup>2</sup> and Wheeler<sup>3</sup>. Besides 'Cemetery H', only two sites in Bahawalpur—Lurewala and Rathatheri—yielded the relics of this culture<sup>4</sup>. At one stage Gordon Childe<sup>5</sup> and Wheeler<sup>6</sup> identified the 'Cemetery H' people with the Aryans and credited them with the destruction of the Harappan fortifications. According to Thapar<sup>7</sup>, Lal<sup>8</sup>, and others, the theory does not carry much conviction, as the stratigraphic and other evidence, go against it. The debris layers of the habitation area show that there was a gap of time between the 'Cemetery H' people and the Harappans<sup>9</sup>. The very limited distribution of 'Cemetery H' pottery is also hindrance in accepting the identification of the authors of that culture with the Aryans<sup>10</sup>. If these people were the Aryans, this ware also should have been found in the Ghaggar, Sutlaj and Upper Ganga Valleys where there existed the early settlements of the Aryans, as testified by the Vedic literature<sup>11</sup>. As far as the racial affinity is concerned, it may be stated that the skeletons from 'Cemetery H' (Stratum II and pot-burials) belong to the Indo-

1. Vats, *Excavations of Harappa*, p. 203 ff.

2. Sastri, *New Light on the Indus Civilization*, Vol. 2, pp. 12-38.

3. Wheeler, "Harappa 1946—The Defence and Cemetery R-37", *AI*, No. 3, pp. 58-130.

4. Lal, "Prehistoric Investigation", *AI*, No. 9., p. 88.

5. Childe, *New Light on the Most Ancient East*, p. 223.

6. Wheeler, *op. cit.*, pp. 58-130.

7. Thapar, "The Aryans: A Reappraisal of the Problem", *ICWTC*, p. 152.

8. Lal, *op. cit.*, p. 88.

9. *Ibid.*

10. *Ibid.*

11. *Ibid.*

Caspian group of people. According to Sarkar<sup>1</sup>, the people of Stratum II, are akin to the people of Tepe Hissar I and II; and those of Stratum II are akin to the people of Tepe Hissar III. But the evidence at hand is not conclusive. Whatever information is available about the skeletal remains of these people, it clearly shows the absence of the Armenoid Type, characteristic of the Northern Steppe folk<sup>2</sup> to which according to Guha, the Aryans seem to have belonged, as the information regarding their physical characteristics described in the Vedic literature showed him<sup>3</sup>. In this connection it may also be pointed out that although the interpretation of the painted panel (Fig. 68) occurring on a few burial jars in the light of Hindu mythology of the later date may have some validity, it may not be absolutely correct since while the Vedic references are in the context of 'Cremation' the burial jars from 'Cemetery H' contain post-exposure bones<sup>4</sup>.

In the light of these difficulties in the evidence quoted it is difficult to believe that the Aryans were the authors of the 'Cemetery H' Culture. Not unlikely, these were the aboriginal people, or else they came from some distant land in West Asia, as Sankalia has recently suggested on the basis of pot forms. He observes: "the ring-base, dishes-on-stand and such other distinctive features....characterize the prehistoric pottery of Western Asia as already noted by Vats....genetically the 'Cemetery H' pottery is foreign oriented<sup>5</sup>". Although excavations in future may throw some more light on this problem, certain ceramic designs found on the pottery of the 'Cemetery H', can throw at least some light on their foreign contacts. A pot, recovered from 'Cemetery H' has a motif in which birds are associated with rayed circles<sup>6</sup>. A similar pattern has been found on a vase from Tepe Giyan<sup>7</sup> (Figs. 31.25, 26) although both the pots are different in shape. Plants or trees<sup>8</sup>, perhaps meant to depict the 'tree of life', have been found painted on some pots from 'Cemetery H' (Figs. 31.22—24). These designs, according to Gajjar, bear a close likeness to the Assyrian version of the 'tree of life' represented on a royal tunic<sup>9</sup>. Allchins<sup>10</sup> further suggested that the pottery showed some affinities with wares from Tepe Giyan (Strata II and III) and Djamshidi II and Susa D, all dated to *circa* 1500 B.C.

1. Sarkar as quoted in A. Ghosh's article "The Indus Civilization : Its Origin, Authors, Extent and Chronology", *Indian Prehistory* : 1964, p. 141.
2. Lal, "Protohistoric Investigation", *AI*, Vol. 9., p. 88.
3. Guha, "Racial elements in the population", (*Oxford Pamphlets on Indian Affairs*, 1944). Not everyone accepts this theory.
4. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, pp. 77-79.
5. Sankalia, "The Cemetery H Culture", *Puratattva*, No. 6., pp. 12—19.
6. Gajjar, *op. cit.*, p. 55.
7. *Ibid.*
8. *Ibid.*
9. *Ibid.*, p. 56, fig. 170.
10. Allchin and Allchin, *The Birth of the Indian Civilization*, p. 149.

To conclude, it may be pointed out that while the mature phase of the urbanized Harappa Culture was coming to close round about 1700 B.C., a number of regional chalcolithic village-based cultures in Central and Western India were coming into prominence. In the absence of a unifying force, which usually characterizes urbanized cultures, these culture-complexes grew in comparative isolation but with greater flexibility. This period of the post-Harappan chalcolithic cultures was, therefore, viable for the infiltration of West Asian elements. Jhukar and Jhangar are definitely the cultures with a large number of West Asian elements, as has been explained earlier. About the chalcolithic cultures of the Deccan, Rajasthan and Central India, Prof. Sankalia has drawn our attention to certain pottery types, painted designs and beads which go a long way to establish Indo-Iranian contacts in the 2nd millennium B.C. In one of his recent papers, Prof. Sankalia has also shown that the 'Cemetery H' pottery, including some of the painted designs on it, has a definite element of West Asian types<sup>1</sup>. At another place<sup>2</sup>, he has tried to show similar Iranian influence on the Ochre Coloured Pottery discovered at Saipai, Distt. Etawah. He has drawn our attention particularly to the strap handles which are not indigenous in origin. As already shown, in all attempts of this kind Prof. Sankalia's methodology is largely empirical. According to him, all that was in the Harappan kit should be taken as indigenous. So as also its derivatives. Thus, all that does not conform to the original Harappan antiquities or their derivatives should be sorted out and seen if they conform to the known contemporary West Asian types. If, according to him, we can trace the similarities, we should feel sure that some sort of cultural infiltration, directly or indirectly, was there. This is how he has been able to demonstrate India's contacts with West Asian countries in general and Iran in particular even during the seemingly less important village cultures of the post-Harappan period. Jhukar, Jhangar, Ahar, Malawa, Jorwe, 'Cemetery H', O.C.P. and Copper Hoard, and P.G. Ware and Swat Valley cultures betray the same phenomenon. Although, some of the scholars, like A.V. Shatenko, M.K. Dhavalikar and B.K. Thapar, have their own doubts in the validity of the similarities shown in pot-shapes, beads, etc., by Prof. Sankalia, nevertheless, by and large, they all agree that the similarities are not without any significance, particularly when long spouted jars, long-channeled bowls, high pedestalled cups, strap handled pots, etc., do not have their real ancestry in India.

1. Sankalia, "The Cemetery H' Culture," *Puratattva*, No. 6, pp. 12-19.

2. Sankalia, *Prehistory and Protohistory of India and Pakistan*, pp. 397-400.

## CHAPTER V

# THE PERIOD OF INDIAN MEGALITHS

Archaeology, during the last two centuries, has brought to light a complex of stone structures which are widely distributed over the globe but little understood. These are known as 'Megaliths'. Although scholars writing particularly on megaliths in Indo-Pakistan subcontinent have repeatedly surmised that the Indian megaliths provide substantial evidence in favour of Indian's contact with the outside world, yet the details of affinities are still obscure. Obviously, our efforts will be concentrated on piecing together the oft-repeated items of evidence and evaluate the major theories in its light.

The term 'Megalith' is the combination of two Greek words—'Megas'—large, and 'Lithos' stone. The term has been used for the structures of rudimentary character, often built of large rough stones. These monuments are, by and large, funerary or commemorative, or even religious in character. Objects recovered from the megaliths of a particular region often exhibit remarkable uniformity in form, material, and techniques of manufacture so as to justify the label 'megalithic culture', at least in the regional context. Thus, objects recovered from hundreds of south Indian megaliths include a variety of iron tools and weapons and pots and pans of Black-and-red ware, almost in a uniform manner. The metal objects comprise axes, knives, bill-hooks, hoes, wedges, bangles, rings, etc. The pottery includes bowls, lids, vases, tulip-shaped pots, dishes, chalices, legged vessels, etc. Besides these, several objects of bronze, copper, shell, gold, silver, semi-precious stones and terracotta have also been found, such as bells, rings, bangles, ear and head ornaments, and bull figurines (Fig. 70).

### Previous Work

The occurrence of megalithic monuments in India, especially in the south, has been noticed from time to time by several explorers and scholars. Thus, in 1872, James Fergusson<sup>1</sup> examined the south Indian megaliths in some details. Then

1. Fergusson, *Rude Stone Monuments in all countries : their Age and Uses* (London, 1872). For an annotated bibliography on the subject, see Ramachandran, *A Bibliography on Indian Megaliths* (Madras, 1971).

in 1876, Dr. Jagor of Berlin<sup>1</sup> dug at the famous megalithic Urn burial site of Adichanallur in Tirunelveli district, Tamil Nadu. Archaeological Survey of India conducted further excavations<sup>2</sup> at the same site between 1889 and 1905; and also at Perumbair from 1904 to 1908. A compendium by Sewell<sup>3</sup>, the *List of Antiquarian Remains in the Madras Presidency* was, however, already there since 1882 to help the Survey since it contained several references to megalithic sites. The following half-a-century witnessed a large amount of sporadic work. The first systematic work was undertaken by Krishnaswami<sup>4</sup> in 1948-49. The work has shown that megalithic monuments have a very wide distribution in India and Pakistan<sup>5</sup>.

1. Rea, *Catalogue of Prehistoric Antiquities from Adichanallur and Perumbair* (Madras, 1915).
2. *Ibid.*
3. Sewell, *List of Antiquarian Remains in the Presidency of Madras*.
4. Krishnaswami, "Megalithic types of South India", *AI*, No. 5, pp. 35-46.
5. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, pp. 125-240. South India is quite rich in megalithic monuments, but the scientifically excavated sites are not many. However, the well-known sites may be detailed in the following order :

*Karnataka* : (1) Brahmagiri, (Wheeler, "Brahmagiri and Chandravalli 1947 megalithic and other cultures in Mysore State", *AI*, No. 4, pp. 180-310); (2) "Jadganhalli" (*IAR*, 1956-57, p. 34); (3) Maski (Thapar, "Maski 1954 : a Chalcolithic Site of the Southern Deccan", *AI*, No. 13, pp. 40 ff.); (4) Halingali (*IAR*. 1965-66); (5) Terdal (*Ibid.*); (6) Hunur (*IAR* 1968-69); (7) Hallur (Nagaraja Rao, *Protohistoric Cultures of the Tungabhadra River*, pp. 13-25.)

*Tamil Nadu* : (1) Sanur (Banerjee *et al.*, "Sanur 1950 and 1952 : a megalithic site in District Chingleput", *AI*, No. 15, pp. 12 ff.); (2) Kunnattur, (*IAR* 1956-57, p. 23, and 1957-58, p. 37); (3) Amrithamangalam (Banerjee, "The Megalithic Problem of Chingleput in the light of the Recent Exploration", *AI*, No 12, 1956, p. 31); (4) Paiyampalli, (*IAR*. 1964-65 and 1967-68, pp. 28-30).

*Andhra Pradesh* : (1) Yelleswaram, (2) Nagarjunakonda (*IAR*, 1957-58, 1959-60; Sarkar, "Megalithic Monuments of the Lower Krishna Basin", *SPPMI*, pp. 14-16); (3) Kesarpalle (Sarkar, "Megalithic Monuments of the Lower Krishna Basin", *SPPMI*, p. 19).

*Maharashtra* : (1) Junapani (*IAR*, 1961-62, pp. 32-34), (2) Khapa (Deo, *Excavations at Takalghat and Khapa*)

*Northern Indo-Pakistan Sub-continent* : (1) In the neighbourhood of Karachi (Frere, "Descriptive Notices of Antiquities in Scinde", *JBBRAS*, Vol. V, 1857, p. 353 ff; Cousens, "The Antiquities of Sind", *ASIIS*, Vol. XLVI, 1929, pp 44-45); (3) on the hills near Wagholi-dur (Frere, *Ibid.*, p. 349); on the road to Shah Bilawal in Baluchistan (Wheeler, *Early India and Pakistan*, p. 159); (4) in the hills on the direct road from Karachi to Kotri (Frere, "Descriptive Notices of antiquities in Scinde", *JBBRAS*, Vol. V p. 349). Megaliths have been located in other areas of Pakistan also, for example, at Asota (Gordon *JIAI*, No. I, 1945, p. 18) 28 km. east-north-east or Mardan group of menhirs has been reported.

*Central India* : megaliths are located at several places in the districts of Allahabad (*IAR*, 1962-63, pp. 31-32; 1963-64, p. 39; Kotia was the main site here). Banda, (*Ibid.*, Sharma has located a cairn-burial site on the Jhurri Nala in Tehsil Karyi of district Banda); Mirzapur (*IAR*, 1962-63, p. 38; Banimilia-Bahera was excavated by Narain); Varanasi (*IAR* 1962-63, pp. 39-41; and 1963-64, pp. 57-58); Kakoria, Hathinia Pahar and Bhadahwan hillock (Distt. Varanasi) produce a large number of megaliths and Agra (Carleyle, "Report on a Tour in East Rajputana in 1871-72 and 1872-73 (*ASIAR*, Vol. VI, 1878, pp. 13 & 33-39; Singh,

It is, however, not easy, at the present state of our knowledge, to connect the megaliths of the regions located north of the Vindhya range with the megaliths of South India, or even of West Asia and Europe; nor it is easy to fix the chronology of Indian megaliths either of the north or of the south<sup>1</sup>. On the whole, they seem to belong to first millennium B.C., some of them to the first half while the rest to the second half.

"Megalithic Remains in the Aravallis", *Puratattva*, No. 2 (1968-69), p. 46—Khera and Satmas are the megalithic sites, located in Agra). A few cists have also been reported by Carlleyle in Almora (Henwood, *Edinburg New Philosophical Journal* NS (1856) pp. 204-5) particularly at Deodhoora. Cunningham (*ASIAR*, I, 1862-65, Introduction, p. XXX) reported the occurrence of 'Cromlechs', cairns and stone-circles in the hilly parts of Delhi and Orissa. But these observations have not been confirmed by later explorations (Wheeler, "Brahmagiri and Chandravalli 1947; Megalithic and other cultures in Mysore State", *AI*, No. 4, 1947-48, p. 302). In Rajasthan megaliths have been noticed at Macheri (Catlleye, *op. cit.*, pp. 13-15, 33, 39, 88, 89 and 104-108) and Deosa (*ASIAR* VI, pp. 104 ff.)

*Kashmir, Ladakh and Tibet*: Menhirs have been noticed at a few places in Kashmir e.g., at Burzahom (*IAR* 1960-61, p. 11) Burial cists have been found in the Leh Valley of Ladakh (*ASIAR*, 1909-10, pp. 104 ff.)

Leshnik, "Nomads and Burials in the Early History of South India", *Pastorallists and Nomads in South Asia*, (University of Heidelberg, South east Asian Institute, 1972) pp. 40-67. Figures 6 and 7 show the distribution of different types of megaliths in South India.

1. Curiously enough, R.S. Panchamukhi ("Dolmens and Cairns of Karnataka", *JBU*, Vol. XIV, Pt. IV, 1946, pp. 10-28) thought that they belonged to the Palaeolithic period, while J. Dubreuil (*Vedic Antiquities*, pp., 25 ff.) felt that the Malabar megaliths belonged to the Vedic Age. Wheeler ("Brahmagiri and Chandravalli 1947 : Megalithic and other cultures in Mysore State", *AI*, No. 4, p. 202; *Early India and Pakistan*, p. 163) suggested, for the first time, a definite date, circa 3rd century B.C., for the beginning of the South Indian megalithic tradition, on the basis of the stratigraphy provided by Brahmagiri excavations. N. R. Banerjee, ("The Excavations at Sengamedu", *The March of India*, June, 1956, pp. 43-46; "Megalithic Problem in India", *Studies in Prehistory, Robert Bruce Foote Memorial Volume*, p. 172; "Megalithic Culture of South India", Paper read in the Conference of Asian Arch. 1961), however, suggested the time-bracket of circa 700 B.C. to 200 A.D. for these megaliths. K. S. Ramachandran ("Chronology of Indian Megaliths, some considerations", *Puratattva*, No. 3, 1969-70, pp. 107-109.) places them in the 4th century B.C. at the earliest. According to Gupta, (*Disposal of the Dead and Physical Types*, p. 193) they may be dated as far back as 900-800 B.C. relying on the C-14 date supplied by D.P. Agrawal for Hallur, a megalithic site. Allchin (*Birth of Indian Civilization*, pp. 230-32) on the same ground, is of the opinion that the earliest of these structures may have been built in about 1000 B.C. However, majority of the Radio-carbon dates (for details see, Agrawal & Kusumgar, "Radio-carbon Dates of samples from Southern Neolithic Sites", *Current Science*, Dec. 5, 1966, pp. 585-86; for a summary and assessment, see Ramachandran, *op. cit.*) fall between the 5th and 3rd centuries B.C. Therefore, it would appear that the majority of the Indian megaliths should be placed in the second half of the first millennium B.C. Recently, Leshnik (*op. cit.*) has tried to discover, without much success, however, parallels in several Iranian graves containing terracotta sarcophagi. The weight of his arguments falls on the early centuries of the Christian era with a possible extension in the last two centuries of the era before Christ.

In 1949 Krishnaswami proposed a classification of south Indian megaliths which is now considered to be the most standard one<sup>1</sup>. (Fig. 71)

### Distribution of Megaliths

Megalithic monuments are not restricted to India, as said earlier. They have been found in other parts of the world also<sup>2</sup>, such as Sweden, England, Germany, France, Spain, Portugal, Italy, Algeria, Western Sahara, Somaliland, Abyssinia, Palestine, Arabia, Georgia, Cambodia, Indonesia, Japan, and Phillipines. But there is no universal type of pottery, implements or any other kind of object obtainable from the graves of this category and, therefore, in the world context there is no uniform 'megalithic culture' as such. The megaliths in Europe, it may be pointed out, belong to very early dates, ranging from 3200 B.C. to 1500 B.C. They are either of the Mesolithic Period or of the Bronze Age<sup>3</sup>. Early Iron Age megaliths in Europe or in the Middle East are extremely rare; in India and South East Asia they are, on the other hand, of the Iron Age alone (1000 B.C. to 100 A.D. and later).

### Indian Megaliths and West Asia

What relationship is, therefore, likely to have existed between the Indian and European-West Asian megalithic-complex? Scholars, because of structural similarity between the megaliths of Europe and India, and the priority of the European megaliths in chronology, believe that the idea of erecting megaliths came to India from the West. The place of immediate origin of Indian megaliths is, however, still shrouded in mystery because of a few problems which create difficulties for the archaeologists<sup>4</sup>:

- (1) The typology of Indian megaliths and of Western megaliths is not wholly identical.
- (2) The grave-offerings recovered from the megalithic tombs of different regions of the world differ widely.
- (3) The date of Western megaliths is much earlier than their Indian counterparts.

1. Krishnaswami, "Megalithic Types of South India", *AI*, No. 5, pp. 35-45; Wheeler, *Early India and Pakistan*, pp. 153-157. (1) Dolmenoid cists, (2) Slabbed cists, (3) Shallow pit burials, (4) Deep pit burials, (5) Umbrella stone or hat stones, (6) Hood stones, (7) Multiple hood stones, (8) menhirs, (9) Underground Rock-cut caves.
2. Srinivasan and Banerjee, "Survey of South Indian megaliths", *AI*, No. 9, 1953, p. 108.
3. Eyre Edward (ed) *European Civilization*, Vol. II, p. 182; Haimendorf, "The problem of Megalithic Cultures in Middle India", *Man in India*, Vol. XXV (1945), pp. 73-86.
4. Gupta, "Gulf of Oman : The original Home of Indian Megaliths", *Puratattva*, No. 4, 1970-71, p. 4; also Ramachandran, "Gulf of Oman : original Home of the Indian Megaliths, a Reappraisal", *Puratattva*, No. 6, pp. 20-26.

Scholars have, however, made some attempts to trace links between the Indian and Western megaliths. Wheeler traces the possible resemblance of Indian megalithic types with the megalithic structures of West Asia and Europe, and suggests Karachi as the spring-board of the megalithic 'idea' for entry into south India<sup>1</sup>. Gordon, on the other hand, is of the opinion that the megalithic idea might have come across the sea through Arabia<sup>2</sup>. According to him, the megalithic architecture can be associated with the people whose ships floated between the Western coast of India and Southern Arabia in the first half of the 1st millennium B.C.<sup>3</sup>. But due to lack of convincing archaeological evidence he could not properly substantiate his views. Heine-geldern proposed another theory and places the original home of the megalith builders of India in Central Asia<sup>4</sup>, and also favours the view that there were several overland waves which have been responsible for the megalithic idea into India. Haimendorf, on the other hand, is of the opinion that the migration of the megalith builders took place by sea from the mediterranean coast. They followed a south-ward movement along the western coast of India<sup>5</sup>. According to Walter Ruben, the megalithic trait came to India from Palestine via Persia<sup>6</sup>. Banerjee suggests that the Indian megaliths were inspired by the Cairn Burials of Baluchistan and that the megalith builders came to south India from the north-west through the land route, crossing the mountain Vindyas<sup>7</sup>.

The theory of Leshnik may also be mentioned here according to which, the ancestry of Indian megaliths seems to lie in Persia and is linked to Caucasian influences. He writes, "In the middle of the last century....megaliths in both the east and the west were attributed to Druids, Scythians or some other Turanian 'Urvolk'. Indian history is quite familiar with such nomads as the Sakas and Kushanas<sup>8</sup>". He has given a few parallels in support of his theory<sup>9</sup>. These parallels belong to the individual 'megalithic' artefacts in the complex of Central Asian antiquities, dated between the 2nd century B.C. and 2nd century A.D. Decorated bronze lids and ladles have been compared with certain items found in Parthian Taxila<sup>10</sup>; small bronze

1. Wheeler, "Brahmagiri and Chandravalli 1947 : Megalithic and other cultures in Mysore State", *AI*, No. 4; *Early India and Pakistan*, pp. 163, 168.
2. Gordon, *The Prehistoric background of Indian Culture*, p. 18.
3. *Ibid.*, pp. 155-161.
4. Heine Geldern, *Das Megalith Problem*; also in Foreword of the *Iron Age in India*, by N. R. Banerjee.
5. Haimendorf, "New Aspects of the Dravidian Problem", *Tamil Culture*, II, 1953, pp. 127-135.
6. Banerjee, *Iron Age in India*, pp. 56-57.
7. *Ibid.*, p. 264; also "The megalithic Culture of South India", *A Paper read in the Conference of Asian Archaeology*, 1961.
8. Leshnik, "Early Burials from the Nagpur District, Central India", *Man*, Vol. V, No. 3, pp. 498 ff. Also, Leshnik, *op. cit.*, pp. 59-61.
9. *Ibid.*, p. 509 and p. 60 respectively.
10. Leshnik, "Early Burials from the Nagpur District, Central India", *Man*, Vol. V, No. 3, p. 507

and iron jingles seem to belong to Central Asia; copper bangles with incised decoration on the two ends have their parallels in the Caucasian region<sup>1</sup>. Allchin's theory, proposed recently, incorporates practically all the prevailing theories, except that of Banerjee. According to him, "the South Indian graves appear as a developing complex combining several streams of influence in them"<sup>2</sup>. These streams and their sources as conceived by Allchins, may be enumerated as below:

(1) Some grave-types resemble those of Central Asia, Iran and the Caucasus and, probably, have been brought from these areas to India by Indo-European speaking immigrants.

(2) It appears that some of them developed out of the indigenous Neolithic-Chalcolithic burial customs of the Deccan.

(3) (a) A series of influence came from Levant and the coast of Arabia which have also produced the stone cist-graves with or without port-holes.

(b) Pottery Sarcophagi are found in Mesopotamia and in the Persian Gulf region during the late centuries B. C.<sup>3</sup>.

(c) Legged urns, identical with Indian types, are reported from the Yemen.

(d) Rock-cut graves with shaft like entrances have been found in the above three regions. They are similar in form to those of the Malabar Coast"<sup>4</sup>.

Allchins<sup>5</sup> conclude : "Strictly speaking, not all these examples are dated with any precision, and, therefore, they can scarcely provide a firm basis for comparisons. He suggests "that during the first millennium B. C. India received them as influences by dint of maritime contacts with the Middle East"<sup>6</sup>. According to him, Necropolis B at Sialk in Iran was the key site in this regard. He has, in this connection, cited horse-bits and bells of iron found in several Indian megaliths, as well as the jugs with long raised channel spouted bowls and a small bowl-on-stand found in two megalithic graves in the Perumal hills, Kodaikanal, district Madura<sup>7</sup>.

Recently K. V. Soundara Rajan has expressed somewhat similar views about the origin of Indian magaliths. He says that "they (megaliths) are composite in their architectural ingredients and from diverse original sources, a maritime, as well as overland. Thus within the country itself they would be divided into many 'first arrival' zones later resulting in contact zones of hybridisation and diffusionary zones

1. Leshnik, *op. cit.*, p. 502.

2. Allchin and Allchin, *op. cit.*, pp. 229-30.

3. A few examples of the legged and plain earthern Sarcophagi, sometimes with anthropomorphic lids from Baghdad, Beth-shan; and several places in Palestine, have been reported. Dikshit, "The Origin and Distribution of Megaliths in India", *SPPMI*, p. 5.

4. Ramachandran, "Megalithic Rock-cut Caves and their parallels outside India", *SPPMI*, pp. 59-65.

5. Allchin and Allchin, *op. cit.*, p. 230.

6. *Ibid.*

7. *Ibid.*

of transmutation. Unifocal or unidirectional theory for their arrival and dispersal within the country would, therefore, be inadmissible”<sup>1</sup>.

### Foreign Strains in Indian Megalithic Complex

These two theories emphasize that the South Indian megalithic complex is a combination of several streams appearing at different times within the first millennium B. C. But here it should be borne in mind that no generalization can be made only on the basis of parallels of individual cultural items and that too without regard to chronology. Gupta<sup>2</sup>, while accepting the position that the megalithic complex of South India was developing complex with several streams of influences, does not accept as valid all the sources of influence enumerated by Allchin. According to him, there were only two routes for the immigrants, one which came over land and the other which came through the sea, both from the regions West of India. He is of the opinion that the areas around the Persian Gulf or the Gulf of Oman may provide the key to the problem relating to the origin of the Indian megaliths. Belonging to the Early Iron Age of the first millennium B. C. we have in that region, besides cairn burial, several types of sepulchral monuments, the plans and the construction of which are reflected in the Indian peninsular megaliths whose traditions go back to the early first millennium B. C. Thus, South-eastern Arabia, with its outlet in the Gulf of Oman, may be taken as the epicentre of the Baluchi Cairns as also of the peninsular (Indian) megaliths. It was in the island in the Gulf of Oman that several traditions from Palestine, Mesopotamia, Southern Arabia, etc., came, mostly along with traders, and got fused<sup>3</sup>. (Fig. 72). Recently, Ghosh<sup>4</sup> has further shed light on this possibility. He himself discovered near the town Dhamar in Central Yemen ‘a large number of megalithic monuments, consisting of circles made of orthostats, menhirs and irregular stone slabs of enormous sizes.....At al-Hamli, a site 50 miles from Ta’izz, more megaliths from here have been found, particularly of stone-circle type’.

After going through all the above mentioned theories it is clear that in the present state of our knowledge it is difficult to decide upon the actual place of origin of Indian megaliths. These theories suggest a number of western countries as the original home of these monuments; whatever their claim be, practically all agree on the western origin of Indian megaliths. It appears, therefore, that the megaliths were introduced in India from outside.<sup>5</sup> There are two groups of scholars-Leslnik and Banerjee tracing the movement of the megalith-builders from north to south (Central Asia-Iran theory) while other group of scholars consisting of Krishnaswami,

1. Soundara Rajan, “Megaliths and Black-and-Red Ware”, *SPPMI*, p. 76.

2. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, p. 228.

3. *Ibid.*

4. Ghosh, “Megaliths in Yemen Arabs Republic”, *Puratattva*, No. 7 (1974), pp. 81-82.

5. Gupta, *op. cit.*, pp. 323-24; For contrary views see Ramachandran, *op. cit.*, 1972-73; pp. 20-24.

Wheeler, Haimendorf and Soundara Rajan thinks that first the megaliths came to south India from the West, and then their movement within India took place from the South to the north. According to Gupta<sup>1</sup>, megalithic folk reached in the zone of first arrival along the western coast of India in about 1000 B.C., then they spread rapidly throughout the Peninsula within a few centuries—8th to 6th centuries B.C. It was a sort of colonisation. (Fig.72) The mechanics behind this colonisation is important. Megalithic culture could spread only with the movement of people and the movement took place because of some compelling reasons of population growth, or trade contacts, or religious expansion. It may have been also due to economic causes in the homeland, or because of the “boatloads of voyagers driven against their will by the wind and currents to these remote solitudes”<sup>2</sup>.

Be that as it may, there is fragmentary, yet strong, evidence to assert that there was some sort of relationship between the Indian and western megaliths. In this connection the following data may be quoted.

### Indian Megaliths and Arabia

Several types of Cairns—round, oval, square and rectangular—have been found in southern Arabia<sup>3</sup>. At the Ras Result, the larger ones measured 6 to 12 metres in diameter and around the larger graves there were smaller ones<sup>4</sup>. The Cairns, generally ‘Cairn Circles’, were surrounded by either a single chain or double concentric chains of big boulders. A Cairn with a free standing menhir in its centre has been noticed at a Hajar province of Hadhramaut<sup>5</sup>. It is important to note that these types of Cairns have their parallels in India and Irans<sup>6</sup>; round and oval types have been found from southern Iran, Baluchistan<sup>7</sup>, Gujarat<sup>8</sup>, the Vindhya<sup>9</sup>, and the whole of the Indian Peninsula<sup>10</sup>, southern Iran<sup>11</sup>, Sind<sup>12</sup> and the Vindhya<sup>13</sup> have

1. Gupta, *op. cit.*, p. 231.

2. Childe, *op. cit.*, p. 325.

3. *Ibid.*

4. Carter, “Geography of the South-west Coast of Arabia”, *JBBRAS*, Vol. III, Pts. I and II (1847), pp. 262-263.

5. Bowen, *Archaeological Discoveries in Southern Arabia*, p. 134.

6. Gupta, *op. cit.*, p. 325.

7. Gordon, *Prehistoric Background of Indian Culture*, p. 156.

8. Rao, “Excavations at Amreli”, *Bulletin of Museum and Picture Gallery, Baroda*, Vol. XVIII, 1966.

9. *ASIAR*, Vol. VI, (1878), pp. 13-15, 33-39, 88-89, 104-108.

10. Aiyappan, Presidential Address, *Indian Science Congress Association*, Vol. XXXII, Session Anthropology and Archaeology Section, 1945,

11. Lamberg, Karlovsky, “The Cairn Burials of South Eastern Iran”, *East and West*, NS, Vol. 18, Nos. 3-4, pp. 269-76.

12. Raikes, *Archaeological Explorations in Southern Jhalawan and las Bela*, pp. 156 ff.

13. Singh, “Megalithic Remains in the Aravallis”, *Puratattva*, Vol. 2, (1968-69), pp. 46-48; *IAR*, 1962-63.

revealed square and rectangular Cairns; Madhya Pradesh<sup>1</sup>, in addition, has produced the Cairns with menhirs.

The rock-out caves of four types occurring on the Western ghat in Kerala<sup>2</sup> provide a new constructional idea in South India. They are to be found mainly in districts of Calicut, Cannanore and Trichur. Similar rock-cut tombs, known as 'shaft graves' outside India, have been found in ancient Palestine<sup>3</sup> and in the Mediterranean island of Cyprus<sup>4</sup>. Megiddo, Gezer, Jericho, Tell Ajkul, Tell Fara are only a few important sites in Palestine. Lapithos, Ajios Jakavos, Vouni are some of the important Cypriot sites. Their common architectural features can be summarised as follows<sup>5</sup>.

1. The graves have a shaft entrance. The Palestinian shaft-graves show several forms, while the Kerala graves are confined only to rectangular shape.

2. Steps, found in Kerala shaft-graves have been cut on the vertical face of the shaft. It is not a regular feature of the Palestinian graves, although they do occur in the Gezer graves. They can also be compared with Port-holes of megalithic dolmens and cists. There is a close similarity between the steps of Kerala graves and of Cypriot graves, and those Tell Fara of the Iron Age.

3. As regards the multi-chambered variety, the Palestinian graves do not differ very much from the Kerala graves. The Cypriot graves also bear much similarity with the Kerala ones. The difference is in the shape of the chambers. Cypriot chambers are circular in shape while the Kerala examples are generally rectangular.

4. Both, the Kerala and Palestinian graves possess similar entrances and common pillars. Indian graves are, however, smaller in size than their foreign counterparts.

Barring these minor variations, it appears that there is a basic uniformity in architectural features amongst the rock-cut caves of Kerala and the shaft graves of Palestine and Cyprus. Similarity can be seen between the burial practices of the Indian rock-cut caves and the Palestinian graves<sup>6</sup>.

The South Indian dolmens, rock-cut caves, and Cairn-circles sometimes entomb terracotta legged sarcophagi<sup>7</sup>, zoomorphic in character. Such pottery coffins were not in use in India in the Megalithic period. Probably it came from western

1. Deo, "Megaliths in Maharashtra", *SPPMI*, (1969), pp. 27-36.

2. Ramachandran, "Megalithic Rock-cut caves and their parallels outside India", *SPPMI*, (1969), p. 59.

3. Kenyon, *Archaeology in the Holy Land*, pp. 139-150, 189-190.

4. Gjerstad, *The Swedish Cyprus Expedition*, Vol. I.

5. Ramachandran, *op. cit.*

6. *Ibid.*, p. 64.

7. Gupta, *op. cit.*, p. 328.

Asia<sup>1</sup> where, during the 1st millennium B. C. it was commonly in practice. Some other similarities can also be noticed in the cists of Iran and South India<sup>2</sup>. It has sometimes been said that the port-holed cists of South India are inspired by the port-holed slab graves of Tepe Sialk and the port-holed dolmens of Caucasia<sup>3</sup>. It has also been said that a cemetery of about 50 cairns in Qatar<sup>4</sup>, has stone cists, with roofing slabs, surrounded by smaller boulders. The cist lay in the north-south direction and was cut down into the bed-rock. Hundreds of cup-marks were noticed on a rock. Glob suggests that these are the representations of the female sexual characteristic.<sup>5</sup> Such cist, cairns and cup-marked circle stones are located in India from the Vindhyas to the Deccan. Rivett Carnac<sup>6</sup> compared the cup-marks occurring on the circle-stones of Junapani, near Nagpur, with the Morse Code. Whatever their use, they do offer a parallel in practice connected with megaliths in the east and west alike.

Recently, Dhavalikar has brought to our notice the parallel of a so-called chopper like iron implement from a Brahmagiri megalith<sup>7</sup> excavated by Wheeler in 1947. The parallel is from the Mediterranean region and is well-known in archaeology as 'Roman Coulter'. It is basically a plough-share with long shaft and a half *pipal* leaf like working end. According to Dhavalikar, it establishes contact between India and the Roman world in the early centuries of the Christian era. Although Wheeler has accepted this claim, Leshnik<sup>8</sup>, Ramachandran and others do not agree with this view since the Roman Coulter's working-end is heavy, sturdy and absolutely triangular while the Brahmagiri example is thin, delicate, and leaf like, and, above all, with one end twisted. Obviously, the suggestion of Dhavalikar is open to question.

All the above-mentioned parallels lead us to surmise that there was some relationship between the Indian and Western megaliths although it is difficult to

1. Gupta, *op. cit.* In Mesopotamia, Sarcophagus was in use from 3000 B.C. In Palestine, in the Iron Age, its use was prevalent. Egyptians knew this tradition from the Chalcolithic period. Cananites used them even in 900 B.C. This tradition was known in the Persian Gulf upto about 900 B.C.
2. Childe, "Megaliths", *AI*, No. 4, pp. 5-13.
3. H. Geldern has mentioned this view while writing the foreword of *Iron Age in India*, written by N.R. Banerjee, 1965, p. VIII.
4. Glob, "Prehistoric Discoveries in Qatar", *Kuml* (1957), p. 177.
5. *Ibid.*
6. Rivett-Carnac, "Prehistoric Remains in Central India", *JASB*, Vol. XLVIII, 1879, pp. 1-16.
7. Dhavalikar, "A Megalithic Plough coulter from Brahmagiri," *SPPMI*, p. 76.
8. Leshnik, "Early Burials from the Nagpur District, Central India", *Man*, Vol. 5, No. 3 (1969), pp. 498-9.

determine its exact nature and quantum. Similar objects recovered from the graves of the two regions also throw some light on the similarity between the mode of living of Indian and Western megalithic communities but not much. It is hoped that a thorough and systematic field-work and a careful comparative study of these monuments with those of other regions will, in course of time, help us to solve the problem of dating the Indian megaliths and conclusively fix the region of their origin.

## CHAPTER VI

# THE PERIOD OF THE VEDAS

Recent studies have tried to show that so far there is no definite archaeological evidence to connect the Vedic Aryans with the people of any country outside India. In fact, archaeologists are not sure about the remains which could definitely be ascribed to the Early Vedic Aryans even within the boundaries of India<sup>1</sup>. Vedic literature, on the other hand, throws a considerable light on the relationship between the Vedic Aryans and some of the peoples of other countries, especially those living in Iran and Asia Minor<sup>2</sup>. There is probably the biggest polemics regarding the Vedic Aryans. Obviously, in order to trace the contacts of Vedic India with the contemporary world we have to depend almost exclusively on linguistic evidence. Here, however, we would first deal with the literary evidence and then present a reappraisal of the archaeological and anthropological evidence often quoted by authors dealing with the Aryans in order to review the whole situation afresh.

In his famous address to the Asiatic Society of Bengal in 1786, Sir William Jones drew the attention of linguists to the common features of Sanskrit and the European languages, which, he ultimately traced to their common origin<sup>3</sup>. This discovery, rather hypothesis, led scholars to visualize further the existence of a common home where the ancestors of the speakers of these languages lived in the dim past much before migrating to other places. They hypothesized that the Aryans

1. Thapar, "The Aryans : A Reappraisal of the Problem", *ICWTC*, p. 161; Dani ("Timargarha and Gandhara Grave Culture", *AP*, Vol. III (1967), p. 52) devoted to the excavation report of Timargarha and Gandhara Grave Culture has professedly founded the theory that Gandhara graves of 1500 B.C. belonged to the Early Vedic Aryans. But this has been rightly discarded, after a thorough archaeological investigation, by S. K. Gupta in his book *Disposal of the Dead and Physical Types in Ancient India*, pp. 160-167. Anthropological evidence is also inadequate as Thapar points out.
2. Majumdar (ed.), *The History and Culture of the Indian People*, Vol. I, *The Vedic Age*, pp. 205 ff.
3. Filippo Sassetti, a Florentine merchant, was probably the first to point out the close relationship between Sanskrit and other European languages. Majumdar (ed.), *op. cit.*, p. 205; also Rapson (ed.), *The Cambridge History of India*, Vol. I, *Ancient India*, p. 58; Taylor, *The Origin of the Aryans*, p. 1.

while moving into distant lands, got divided into several groups. They designated these groups as Indo-Europeans, Indo-Aryans, Hittites, Kassites, Mitannians, and so on, particularly on linguistic grounds<sup>1</sup>. Thus, the basic concept of the generic unity of the languages spoken by these peoples gave rise to divergent theories regarding the original home of the Aryans.

According to a number of scholars, the Aryans as Indo-Europeans originally resided as *a single ethnic group* somewhere in the plains of northern Europe<sup>2</sup>. It is said that the racial type evolved here was of pure blood and the people of this stock spoke a common language that was more archaic than any other language of the family. From there, they spread eastward<sup>3</sup>. There is also the Central Asian theory which points out that the land in the vicinity of the Caspian Sea was the original home of the Aryans and it was from there that they migrated and settled in distant lands, evolving divergent cultures<sup>4</sup>. Tilak propounded the theory of the "Arctic home of the Aryans" on the basis of some astronomical and other internal evidence in the *Rigveda* and the *Zend-Avesta*. He believed that *Airyana Vaejo*, the paradise of the Indo-Iranians, who was situated in Arctic region and when it was overwhelmed by an ice-deluge, people had to migrate to other lands<sup>5</sup>. On the other hand, A. C. Das holds the view that *Sapta-Saindhava*<sup>6</sup> was the original home of the Aryans and points out that in the Vedic literature there is absolutely no positive evidence to show that Aryans came from outside.

None of these and several other theories<sup>7</sup> fixing the home land of the Aryans in Arctic region, or Baltic region, or Danube basin, or Ukrainian steppes, or lower Volga area, or Turkmenia or Asia Minor or Central Asia, seems to be sound enough to satisfy all tests, linguistic, archaeological, geographical or astronomical, and the problem of locating the original home of the Aryans still remains unsolved. Still the evidence of philology is a significant pointer towards the Indo-European theory and most of the historians subscribe to it.

In this connection it may also be pointed out that to ascertain the date of the

1. Mookerji, *Hindu Civilization*, p. 66.

2. Penka's Theory quoted by Gordon Childe—*The Aryans*, p. 166; Gile's theory *Cambridge History of India*, Vol. I, p. 61.

3. Cuno's Theory quoted by Taylor, *The Origin of the Aryans*, pp. 30-31.

4. Max Mueller's theory in *Three Lectures on the Science of language*, 1889, pp. 78-79; Pictet's theory in *Origins Indo-Europeaners*, Vol. I, 1859, quoted by Taylor, *Origin of the Aryans*, p. 12.

5. Tilak, *The Arctic Home in the Vedas*, pp. 34-36.

6. Das, *Rigvedic India*, pp. 8-9.

7. Childe, *The Aryans, A study of the Indo-European Origin*; also Taylor, *The Origin of the Aryans*.

*Rigveda* is equally, if not more, difficult. Tilak suggested 6000 B. C.<sup>1</sup>, Max Müller 1500—1200 B. C.<sup>2</sup>, Jacobi 3000—2500 B. C.<sup>3</sup> and Macdonell c. 1500 B. C.<sup>4</sup> There are many other theories in the field but much less rational. Welcome light was, however, thrown, howsoever indirectly, on the dating of the *Rigveda* by an archaeological discovery. At Boghaz-Köi, in Asia Minor, as mentioned earlier, an inscription of about 1360 B. C. records a treaty between Mitanni and Hittite kings. Among the deities invoked for witness on the occasion are those met within the Rigvedic pantheon. The text runs as below :—

"Illāni Mi-it-ra aś-śi-il (ilāni) U-ru-w-na-as-Śi-il (ilu) Indar (ilāni) Na-Śa-a (t-ti-ia-a) n-na—" <sup>5</sup>.

These names are considered to correspond to the names of Rigvedic gods—Mitra, Varuna, Indra and the two Nāsatyās. Some historians believe that they were the common deities of the undivided Aryans before they migrated to different regions<sup>6</sup>. It has also been pointed out by some scholars that the spelling of the names of the deities indicates their Rigvedic origin, and also suggests that the Aryans had established their culture before 1400 B. C. both in India and Asia Minor. At Tell-el Amarna also a Mittanian and Hittite archieves was found containing documents using divine and personal names, as well as numerals<sup>7</sup>, which are Aryan.

It may, however, be mentioned that there is another piece of archaeological evidence which points to a slightly earlier date for the appearance of the Aryans. It is from the northern borders of Iraq that these people, as their pottery, etc. show, came. These were the Kassites of *circa* 1800 B.C. Their leaders, it is believed, who introduced the horse and the chariot in Ancient East, were actually the Aryan princes. In the names of the Kassite rulers of Babylonia, there are several names of Vedic deities, although Kassite language as a whole is different in the Kultepe (in Cappadocia, Asia Minor) tablets of early 2nd mill. B.C. also<sup>8</sup>.

1. Tilak, *The Orion*, p. 206.
2. Max Müller, *Gifford Lectures on Physical Religion*, p. 91; *The Vedas*, p. xi.
3. Winternitz, *A History of Indian Literature*, Vol. I, p. 256.
4. Macdonell, *A History of Sanskrit Literature*, p. 8.
5. These names were discovered by Prof. Hugo Winckler on a cuneiform tablet at the Hittite capital of Boghaz-köi in 1907. See, Meyer in Vol. 42 of Kuhn's *zeitschrift* and the discussions by Oldenberg Keith, Sayce and Kennedy, "The Prehistoric Aryans and the king of Mittani", *JRAS*, 1909, pp. 1094-1119.
6. Majumdar(ed.), *The History & Culture of the Indian People*, Vol. I, *The Vedic Age*, p. 208; Stein, "India between the Cultures", *IC*, Vol. 4, p. 288; Kaikini, "Ancient India and the outer world", *PIHC*, X, Allahabad, 1947, p. 209; Mookerji, *Hindu Civilization*, pp. 68-69; Pusalker, "Cultural Interrelation Between India and the Outside World", *CHI*, Vol. I, p. 146.
7. The use of 'aika' for the numeral one is of great significance since it is not found in any other branch of the Indo-European group of languages, as far as I know.
8. Seton Lloyd, *Early Anatolia*, p. 119.

The antiquity of the *Rigveda* may also be inferred from repeated references in some literary works which were accomplished in India in the 6th century B.C. The bulk of the Vedic literature must, therefore, be of an earlier age and a sufficiently long period of time must be provided for the growth of such a rich and varied literature, as the Vedas, the Brähmaṇas, the Upanishads, etc<sup>1</sup>.

Thus, *circa* 2000—1500 B.C. may be taken as the most probable period for the composition of the *Rigveda*, and other Samhitas; the other Vedic texts may be placed between 1500 and 600 B.C.

## GEOGRAPHICAL KNOWLEDGE

### Vedic Knowledge of Seas and Ships

With these few introductory remarks we may proceed to discuss the contacts of the Vedic Aryans with the outside world. The bulk of the evidence, as said earlier, is literary. Thus, whether the Aryans of the *Rigveda* had the knowledge of the seas and ships is still a matter of controversy among scholars. The references in the *Rigveda* to 'the treasures of ocean', 'gains of trade', 'ship with hundred oars', 'ship-wreck' etc., according to some, indicate that the Vedic Aryans had definitely some knowledge of seas and ships<sup>2</sup>. A passage, in the *Rigveda*, seems to represent Varuṇa as having the knowledge of the sea-routes along which vessels moved<sup>3</sup>. The same texts, as interpreted by some scholars, contain other references to Indian merchants sending out ships to foreign countries in pursuit of gain<sup>4</sup>. Another passage mentions a voyage, headed by Vashistha and Varuṇa in a ship skilfully fitted and undulating happily in the prosperous swing<sup>5</sup>. The same text also refers to a naval expedition, on which Tugra, the rishi king, sent his son probably for commercial gains in distant islands<sup>6</sup>. However, the interpretation of these passages is not free from controversy, still broad conclusions arrived at appear to be not very much far from the truth.

### Vedic Knowledge of Peoples Living beyond the Indian Frontiers

The *Rigveda*<sup>7</sup>, however, refers to the Alinas, Bhalanases and Pakthas who are known to have dwelt in Afghanistan at only slightly later period, thus indicating their probable contact with India during the Rigvedic period also<sup>8</sup>. There are certain references

1. Mookerji, *Hindu Civilization*, p. 69.
2. Rawlinson, *Intercourse Between India and the Western World*, p. 4; Mookerji, *Indian Shipping*, p. 53; Pusalker, *op. cit.*, p. 145.
3. *Rigveda*, I. 25. 7; *Rigveda*, II. 28. 3.
4. *Rigveda*, I. 56. 2.; 112. 10, 11, etc.
5. *Rigveda*, VII. 88. 3.
6. *Rigveda*, I. 116. 3.5.
7. *Rigveda*, VII. 18. 7,
8. Pusalker, *op. cit.*, p. 146; Sankalia, "Cultural outpost of India", *The March of India*, Vol. VIII, No. 5, 1956, pp. 24-28.

which bear allusion to the land of Iran in a broad sense. The 'Parthavas'<sup>1</sup> of the *Rigveda* may be identified linguistically as 'Parthians' and 'Persians'<sup>2</sup>. Another reference to an Iranian tribe can be noticed in the *Atharvaveda* and also in the *Brāhmaṇa* literature. Thus, 'Bahlik', referred to in the *Atharvaveda*<sup>3</sup> and in the *Śatapatha Brāhmaṇa*<sup>4</sup>, may be easily identified with the ancient Iranian tribe of the Bactrians, especially because it is mentioned in connection with the Mujavanta<sup>5</sup>. The Later Vedic literature also refers to the Uttarakurus and the Uttaramadras as distinct from the Kurus and the Madras settled in the Punjab<sup>6</sup>. It is probable that they belonged to some undefined region beyond the Himalayas<sup>7</sup> in Central Asia. On the basis of the similarity of the customs of the Madras, as described in the *Mahābhārata*, with those of the Medians, some scholars<sup>8</sup> have tried to prove that the Madras of the Punjab were the Median immigrants of the Early Vedic period. According to them, the Epic mentions the king of the Madras as Bāhlika-Pungava and this seems to connect him with the Iranian world<sup>9</sup>. Although it is difficult to be categorical on this issue yet the possibility as suggested cannot completely be ruled out.

The Kambojas are also mentioned along with the Gāndhāras who lived on the Western Indian border<sup>10</sup>. Probably, they too belonged to some semi-nomadic hordes of Central Asia which moved from place to place. According to Bagchi, one of their branches might have come to India and, after a few years, it lost its identity as distinct people<sup>11</sup> (Fig. 73).

1. *Rigveda*, VI. 27. 8.
2. Satya Prakash, "Indo-Persian Relation in Ancient India", *Mod. Review*, Vol. 84, 1940, p. 61; Macdonell & Keith, *Vedic Index*, p. 574.
3. *Atharvaveda*, V, 22, 5, 7, 9.
4. *Śatapatha Brāhmaṇa*, 1, 7, 3-8.
5. Satya Prakash, *op. cit.*
6. *Ait. Br.* VIII, 14, 4.
7. Bagchi, "The Role of Central Asian Nomads in the History of India", *JOGIS*, Vol. X, No. 2, 1943, pp. 109-110. Ptolemy for the first time pointed out a town named Ottorokorra and a river and a mountain bearing the same name in Serique (Chinese Turkestan) near the mountain Emodos (Himalaya). Later writers refer to the same place under the name Oporrocora (Apara and Uttar here having the same meaning). Greek writers refer to Uttaraku in this region upto 5th century A. D.
8. Bagchi, *op. cit.*
9. *Ibid.*
10. *Ibid.* See also, B. C. Law, *Some Tribes of Ancient India*, pp. 230-38 for different views on the location of Kamboj. For detailed discussion, see the chapter on epics. It is located in Gujarat, Sind, Afghanistan, Central Asia, etc., differently by different authors.
11. *Ibid.*

## Persian Knowledge of India

The evidence, cited above, shows that the Vedic Aryans are likely to have some contacts with certain groups of people living in Western Asia and Central Asia. It is significant to note that as the Vedic literature contains references to the peoples living in extra-Indian territories so also there are references to India in the ancient literature of other countries, particularly Iran. India (at least a part of it) has been referred to at four places in *Avesta*, the literary monument of the Persians<sup>1</sup>. *Vendidad*<sup>2</sup> also contains important references to India. There is a description of sixteen fine places, and 'Hapta-Hidu' is the fifteenth of them. Hapta-Hidu of *Avesta* can be easily identified with Sapta-Sindhu of the Veda<sup>3</sup> which, as the name suggests, refers to the Punjab region<sup>4</sup>. According to one view, the very name Hindu is of Iranian origin and was applied to denote those who lived near the river Sindhu<sup>5</sup>. In the *Avesta* there is also the mention of 'Satvesa', the Indian side of the Indian Ocean, and its naval exploration, along with the similar exploration of the Indus<sup>6</sup>.

Another allusion in the *Avesta* suggests that the Persians knew about India through their mythologies also. There is a reference to a mountain, called 'Us-Hindva', situated in the middle of the partly mythical sea Vouru-kasha, and it is described as the gathering place of fog and clouds<sup>7</sup>. The meaning of 'Us-Hindva' is 'beyond India'. It is not definite as to which particular mountain it designates—the Hindu-kush or the Himalayas or some other mountain range<sup>8</sup>, nevertheless the expression clearly indicates the knowledge of India on the part of Persians.

## PHILOLOGICAL SIMILARITY

### Linguistic similarity between the Vedas and the Avesta :

As shown so far, philological studies of the Vedas and the *Avesta* indicates that the Aryans and the Persians knew each other for a sufficiently long time. There is certainly a far greater similarity between the Sanskrit and Avestan language than

1. *Srosh Yast, Mihir Yast, Tir Yast and the Vendidad.*
2. *Vendidad*, 1.19.
3. *Rigveda*, VIII. 24.27.
4. Modi, "India in the Avesta", *Asiatic Papers*, Pt. II; Macdonell, *History of Sanskrit Literature*, p. 140; Satya Prakash, "Indo-Persian Relation in Ancient India", *Mod. Review*, Vol. 84, p. 62; Davar, *India and Iran through the Ages*, p. 42. The 'S' of the Sanskrit and the 'H' of the Avesta both are identical and sapta and Hapta both mean the 'seven'; Balsara, *Ancient Iran*, p. 17.
5. *Ibid.*
6. Ernst Herzfeld, *Zoroaster and His World.*, Vol. II, pp. 630, 652 ff.
7. *Yasta*, VIII, 32.
8. Rapson (ed.), *Cambridge History of India*, Vol. I, p. 291.

between any other two Indo-European languages<sup>1</sup>. Researchers<sup>2</sup> have proved that both Avestan language and Vedic Sanskrit are astonishingly similar in vocabulary, grammar, syntax and meter. In fact, sometimes, the language is almost the same and minor differences have been possibly the result of its use by two different sections of the Aryan people (who once lived as one group) living in two different regions for several centuries. Another possibility is that the language of the *Avesta* was derived from the *Rigveda*, as the *Rigveda* is generally regarded as earlier in date to the *Avesta*. It is sometimes said that probably the name *Avesta* is derived from the Sanskrit word '*Upastha*' which is a synonym for the Vedic studies. The Sanskrit words *Veda*, *Mantra*, *Sruti*, *Amnayas*, and *Chhandas* correspond to the Avestan words—*Mathra*, *Prasruti*, *Menai* and *Zend*<sup>3</sup> respectively. In *Yasna*<sup>4</sup> we find the word *Āśā*; there is but one path—the path of *Āśā*. The essence of Avestic teachings is contained in the deep and fundamental conception of *Āśā*. The Vedic *Rta* and the Avestan *Āśā* both have been taken as the two forms of the same word<sup>5</sup>. The resemblance between the two languages is, therefore, so close that at places passages from the *Rigveda* and the *Avesta* read almost the same<sup>6</sup> and can be, with minor phonological modifications, rendered in the two languages without any harm to the meter as also the sense.

### Linguistic similarity between Sanskrit and other languages of the Indo-European Group :

There is also the resemblance between Sanskrit and some other Indo-European languages. The Latin word for fire is 'Ignis' which is the same as the Sanskrit 'agni'<sup>7</sup>. The Avestan word 'Ushah' (dawn) is similar to 'ushas' in the Vedas and cognate with

1. Gupta, "The Veda and the Avesta", *Mod. Review*, Vol. LVIII, 1935, p. 255; Satya Prakash, "Indo-Persian Relation in Ancient India", *Mod. Review*, Vol. 84, 1948, p. 61; Das, "Avesta from Hindu Point of View", *IC*, Vol. 15, 1948-49, p. 27.

2. Kanga and Sontakke (ed.), *Avesta*, Part I (1962) Preface, pp. xxi ff.

3. Gupta, *op. cit.*; Satya Prakash, *op. cit.*; Das, *op. cit.*

4. *Yasna*, 71, 11.

5. Das, *op. cit.*, p. 29; Taraporewala, "Some Vedic words viewed in the Light of the Gathas and other Avesta Texts", *JBBRAS*, Vol. 26; p. 124.

6. For Examples :—

Avestan—Tat thwā Perša érsmoi Vochā Aburā.

Vedic—Tat tvā Prichchha, riju ma vach Asura.

Avestan—Tā chit Mazdā vašmi anyācha vidya.

Vedic—Tā chit medhishtha vashmi anya chāvide.

Satya Prakash, *op. cit.*, p. 61.

Davar, *op. cit.*, pp. 4-5.

7. Davar, *op. cit.*, pp. 3-4.

the Greek 'Eos<sup>1</sup>.' The word 'ratha', used for chariot in the *Rigveda*, has affinity with the Latin word 'rota' and the Celtic 'roth<sup>2</sup>.' The marked resemblance between the words for blood-relations like mother, father, brother, sister etc., in several languages now labelled as 'Indo-European' strongly point to a common home of the speakers of these languages in the distant past<sup>3</sup>.

## RELIGIOUS BELIEFS AND LEGENDS

### Similarity in Religious Beliefs between the Vedic and other Indo-European Peoples

In the sphere of religious belief also the conclusions appear to be the same. The Vedic Aryans seem to have preserved some of their basic religious beliefs of their Indo-European ancestors. It has been clearly shown by some scholars that Vedic literature preserves the prominent features of the Indo-European phase of the Aryans with remarkable fidelity<sup>4</sup>.

The collective designation of the Vedic gods is 'devas'. It is identical with Latin 'Deus', Greek 'Thoes', Lithuanian 'Diewas', Lattish 'Dews', old Prussian 'Dieus', Irish 'Dia' and Cornish 'Duy'<sup>5</sup>. The word is derived from the root 'div', meaning shine. It appears that certain gods were common to all the Indo-European peoples before their migration and the greatest of those heavenly beings must have been he who was heaven itself, the Div<sup>6</sup>. He is designated in the Vedic literature as "Dyaus Pitar" or 'heaven father' and his wife as "Mata Prithvi" or 'mother earth'. He is the same god as the Greek Zeus-Pater, the Roman Jupiter<sup>7</sup>, the German Tius, and the Norse Tyr<sup>8</sup>. These two ideas of fatherhood and motherhood as manifested

1. Davar, *op. cit.*

2. Jairazbhoy, *op. cit.*, 72. A large treasure of cognate terms has been compiled by Buck in his *Dictionary of Synonyms in Indo-European languages*.

3. Davar, *op. cit.*, pp. 3-4; Childe, *The Aryans*, p. 91. For Example :

English	Sanskrit	Latin	Celtic	Teuton	Lithuanian
(Father)	Pitar	Pater	Athir	Fadar	—
(Mother)	Mātṛi	Mater	Mathir	Muotar	Mati
(Son)	Sūnus	—	—	Sunus	Sunūs
(Daughter)	Duhitár	—	—	Dauhtar	Duhté
(Brother)	Bhrātar	Frater	Brathir	Bropar	Bratru
(Sister)	Svāsri	Soror	Siur	Svistar	Sestra

4. Sten-konow, "Indo-European Religious Ideas in Ancient India", *ABORI*, Vol. VI, part II, p. 59.

5. *Ibid.*, p. 60.

6. *Ibid.*; Banerjee, *Hellenism in Ancient India*, p. 273.

7. Sten-Konow, *op. cit.* p. 60;

Zimmer, *The Art of Indian Asia*, p. 50.

8. Banerjee, *Hellenism in Ancient India*, p. 273.

in the sky and the earth, seem to be Indo-European<sup>1</sup>.

### Similarity between the Vedic and Avestan gods

Particularly striking is the close resemblance between the deities of the *Rigveda* and *Avesta*. The animistic nature worship of the gods was a common phenomenon of both the religions—vedic (Indian) and Zarathustrian (Iranian), at the earliest stage<sup>2</sup>. There is close similarity between the Vedic pantheon and the gods and goddesses of Zarathustrianism. The Vedic divinity Varuṇa<sup>3</sup> and the Avestan deity Ahura Mazda, the supreme god of Zarathustrianism<sup>4</sup>, are similar in conception. Varuṇa is the chief of the Asuras (Ahura in *Avesta*). The root ‘Asu’ of the Vedic literature and ‘Ahu’ of the *Zend* has the same meaning. In the Vedic text ‘Maha’ is used for Varuṇa which is similar to the Avestan word ‘Maz’<sup>5</sup>. The Vedic variant of Ahura Mazda is Asur Mahat, preserved in the earliest hymns of the *Rigveda*<sup>6</sup>. Ouranos of the Greeks can be identified with Vedic Varuṇa, the Lord of celestial sea and of the realm of light above it<sup>7</sup>.

Indra in the Vedas is the god of rain. With abundant Soma libations he was implored to fight against and destroy the demon of drought, Vritra<sup>8</sup>, as Tiṣṭriya, the angle of rain, strove against Aposha, the demon of drought in the *Avesta*<sup>9</sup>. He was called ‘Vritra-han’ in the *Rigveda* and ‘Verethragna’ in the *Avesta*<sup>10</sup>. His weapon *Vajra* is not very different from the ones wielded by Middle Eastern storm gods, and, according to some scholars, the concept might have come from there<sup>11</sup>. We may also refer to a Sargonid seal from Tell Asmar, dedicated to the Lord of Vegetation, depicting a seven-headed dragon being attacked by a fertility god armed with a double-ended trident<sup>12</sup>. In the *Rigveda* he is mentioned as Sapta-han or killer of seven<sup>13</sup>. Incidentally, Herakles is also to some extent the Greek counterpart of Indian Indra<sup>14</sup>.

1. Sten-Konow, “Indo-European Religious Ideas in Ancient India”, *ABORI*, Vol. VI, p. 63.
2. Davar, *op. cit.*, p. 6; Unvala, “Political and Cultural Relations Between Iran and India”, *ABORI*, Vol. XXVIII, p. 171.
3. *Rigveda*, I. 24. 14 ; I. 128.7.
4. Davar, *op. cit.*, p. 8; Rapson, *Cambridge History of India*, Vol. I, p. 285.
5. Gupta, “The Veda and the Avesta”, *Mod. Review*, Vol. LVIII, 1935, p. 256.
6. Das, “Avesta from Hindu Point of View”, *IC*, Vol. 15. p. 30. Curiously enough, *majman*, indicative of greatness has been used in the *Rigveda*.
7. Banerjee, *Hellenism in Ancient India*, p. 274.
8. *Rigveda*, VIII, 17.8-9 and VIII. 78.4.
9. *Yast*, VIII, 28-29.
10. Davar, *op. cit.*; Rapson, *Cambridge History of India*, Vol. I, p. 285; Satya Prakash, “Indo-Persian Relation in Ancient India”, *Mod. Review*, Vol. 84, p. 61.
11. Jairazbhoy, *op. cit.*, p. 24.
12. Frankfort, *Cylinder Seals*, 1939, pl. XIII, pp. 121-122.
13. *Rigveda*, X. 49.8.
14. Sten-Konow, “Indo-European Religious Ideas in Ancient India”, *ABORI*, Vol. VI, p. 62.

Another common deity is the Sun God. In the *Avesta* sun is designated as the Hvar-Khshaeta. The Sanskrit equivalent for Hvar (Sun) is Svar (Surya or Savitar)<sup>1</sup>. In both the texts he is described as the 'eye of god'<sup>2</sup>. Both refer to the sun god as having swift and powerful horses<sup>3</sup>. Incidentally, it may also be mentioned that in Greece he was known as Helios<sup>4</sup>. He was also known to the Babylonians since there are some names of Babylonian kings which are very much akin to the names of Indian deities to wit 'Surias' (Indian Surya) and 'Marutah' (Indian Maruta)<sup>5</sup>.

The points of resemblance between the Indian 'Mitra' and the Iranian 'Mithra' are well known. This deity is associated with the sun, and it sometimes appears with Varuṇa in the Vedic text<sup>6</sup>, exactly as Ahura Mithra is sometimes mentioned in the *Avesta*<sup>7</sup>. Both of them provide light, like the sun and moon<sup>8</sup>. Mithra is described as driving chariot with immortal horses<sup>9</sup>, very much like the Vedic gods Mitra and Varuṇa<sup>10</sup>. Mithra is also the god of water and growing plants<sup>11</sup>, as Mitra and Varuṇa are<sup>12</sup>. Worshippers of both the deities followed the same practice of using soma<sup>13</sup> (Haoma)<sup>14</sup> juice and sacred grass (baresma grass). Another point of similarity between the gods is that they are said to have spies who inform them about the contract-breakers, who are afterwards punished<sup>15</sup>.

Another common deity of the Indo-Iranian pantheon is Agni<sup>16</sup>. He is very prominent amongst the Indo-European gods. Zarathustra did not invent fire worship but realized its undisputed popularity in his own times<sup>17</sup>. In the *Avesta* Atare is regarded as the visible symbol of righteousness; he is referred to as the guard of law eternal in the *Rigveda*<sup>18</sup>. The functions of Nairyo-Sangha, a subordinate angel,

1. Davar, *op. cit.*, p. 9.

2. *Rigveda*, I.50.6 and *Yasna*, I.II.

3. *Rigveda*, I.115.3 and *Yasna* I.II.

4. Sten-Konow, "Indo-European Religious Ideas in Ancient India", *ABORI*, Vol. VI., p. 60.

5. Jairazbhoy, *op. cit.*, p. 11. The form in which the first name occurs, is, for example, "Sagarkti surias" which would mean "my redemption is Surias".

6. *Rigveda*, I. 152.; I. 153.

7. *Yasana*, II. 11 and *Yast*, X, 113.

8. *Yast*, X. 142; *Rigveda*, III. 61.7.

9. *Yast*, X. 125. 136.

10. *Rigveda*, I, 152.3.4.5.

11. *Yast*, X. 61.

12. *Rigveda*, X. 62.4.

13. *Rigveda*, I. 137.3.

14. *Yast*, X. 91.

15. *Yast*, X. 45; *Vendidad*, IV. 5-10.

16. Gupta, "The Veda and the Avesta", *Mod. Review*, Vol. LVIII, 1935, p. 258; Davar, *op. cit.*, pp. 10-11.

17. Davar, *op. cit.*, p. 11.

18. *Rigveda*, I. 1.8.

related to Atare, are similar to the duties of Vedic Narashansa, the household priest of heaven mentioned both in the *Rigveda* and the *Avesta*<sup>1</sup>.

Aditi is an ancient Vedic deity who has been variously described as Agni<sup>2</sup>, the mother par-excellence<sup>3</sup>, the earth goddess<sup>4</sup>, the sky<sup>5</sup>, the water<sup>6</sup>, and the Cow<sup>7</sup>. Isis and Ishtar are also called cows, like her, in the Egyptian and Sumerian texts respectively<sup>8</sup>. A close similarity can be observed between this deity and the Mediterranean goddesses Isis, Ishtar, Anahita, Astarte, Demeter and Nana<sup>9</sup>. In this connection it is noteworthy that the *Atharvāveda*<sup>10</sup> contributes a concept regarding Aditi, which was common to India and other countries : the text runs—'In friendly concord with the boar, earth opens herself for the wild swine that roams the forest'. The earth's opening and receiving swines within the abyss recall the autumn festival of the Greeks, called Thesmophoria<sup>11</sup>. In this the pigs are essentially sacrificed in natural clefts or underground shrines. This is connected with the story of Demeter and Persephone which is found in the work of Homer, known as 'Hymn to Demeter'<sup>12</sup>.

Another important feature of the Indo-Iranian faith is the adoration of waters. In Zarathustrianism the angel of water is Ardvīsūrā, known as Anāhitā<sup>13</sup>. It is also the name of a mythical river of celestial regions<sup>14</sup>. A comparison between Ardvīsūrā and Sarasvatī, an Indian river, has been made by S.K. Hodiwala<sup>15</sup>. Like Ardvīsūrā, Sarasvatī also had her origin in the celestial region. She presides over the destinies of people and was worshipped even by the gods<sup>16</sup>.

Apām Napāt, literally the off-spring of waters, is another Indo-Iranian deity of waters<sup>17</sup>. In the *Rigveda* he is worshipped mostly by the females<sup>18</sup>, and a similar

1. *Rigveda*, I.18.9 and *Vendidad*, XIX, 34.

2. *Rigveda*, IV. 39.3; VIII. 19.14.

3. *Rigveda*, I. 89.10.

4. *Rigveda*, IX. 26.1.

5. *Rigveda*, IX. 96. 15.

6. *Rigveda*, 10, 632.

7. *Rigveda*, I. 153.

8. Cf. Sen Gupta, "Iconography of Certain Varahi Images", *Bulletin of the Museum and Archaeology*, in U.P., No. 7. p. 1.

9. *Ibid.*, p. 1.

10. *Ibid.*

11. *Ibid.*

12. *Ibid.*, p. 2—The details of this story can be studied here.

13. Davar, *op. cit.*, p. 11.

14. *Yast*, V. 85, 88.

15. Hodiwala, "Indo-Iranian Religion", in the *K.R. Cama Oriental Institute Journal*, No. 4.

16. *Rigveda*, V. 43.11 and X.184.2.

17. *Yast*, VIII. 34; *Rigveda*, II. 35.

18. *Rigveda*, II. 35.4-5.

reference can be found in the *Avesta*<sup>1</sup>.

One of the most charming deities of the Indo-Iranian pantheon is the Avestan Ushah equivalent to Vedic Ushas<sup>2</sup>, or the goddess of the dawn and Greek Eos and Latin Aurora<sup>3</sup>. Ushas is borne in a brilliant chariot, drawn by gold-coloured steeds<sup>4</sup>.

Another figure is Vayu or Vata, the genius of the wind in the *Rigveda* and the *Avesta*<sup>5</sup>.

Twin deities of the Vedic pantheon are known as Aśvins<sup>6</sup>. They are similar to the Avestan Aspinas and both have the same meaning, "possessing horses". They are associated with the chariot of the sun and evidently typify his resplendent rays<sup>7</sup>. They are known as Nāsatyas<sup>8</sup>, equivalent to Avestan Naunghaitya.

Next is Armaiti, called *spenta Ārmaitiš* in *Avesta*. She typifies devotion and is conceived as the daughter of Ahura-Mazda<sup>9</sup>. The Vedic counterpart of Armaiti is Āramatiš who also personifies devotion<sup>10</sup>. In the *Gathas*<sup>11</sup> as well as in the *Rigveda*<sup>12</sup> she stands for righteousness. Another common deity is called Airyaman in the *Avesta* and Airyaman in the Vedic literature; in the latter he is related with Mitra and Varuṇa<sup>13</sup>. These contacts are supported by the Boghaz-köi Inscription in Asia Minor, as discussed above<sup>14</sup>.

Apart from the common deities of the *Avesta* and the *Rigveda*, there are other points of similarity between the two ancient religions. For example 'Ancestor Worship' was common to both the religions. Among the Vedic Aryans the departed ancestors are addressed as 'Pitrin'<sup>15</sup> and among Iranians they are designated as 'Fravartis'<sup>16</sup> or Muktag and there is a marked resemblance between the conception of the two. Both are said to be residing in the highest heaven and are worshipped with water, fruits and cakes, and are invoked for help and protection during life<sup>17</sup>. In

1. *Yast*, V. 72.

2. Davar, *op. cit.*, p. 13.

3. Sten-Konow, "Indo-European Religious Ideas in Ancient India", *ABORI*, Vol. VI, p. 60; Banerjee, *Hellenism in Ancient India*, p. 274.

4. *Rigveda*, VII. 75.6; *Yast*, V. 6.

5. Davar, *op. cit.*, p. 13.

6. *Rigveda*, VII. 67 to 79 and VIII. 35 hymns.

7. Hodivala, "Indo-Iranian Relation", In *K. R. Cama Oriental Institute Journal*, No. 4.

8. *Rigveda*, VII. 70.6 and VII. 71.4.

9. *Yasna*, XLV. 4.

10. *Rigveda*, V. 43.6 and VII. 42.3.

11. *Yasna*, XLIV. 6.

12. *Rigveda*, V. 43.6.

13. *Rigveda*, I. 136. 2.

14. *Supra*, p. 118

15. *Rigveda*, X. 14.7-8.

16. *Yasna*, XXXVII. 3, *Yast*, XIII.

17. Davar, *op. cit.*, pp. 16-17.

Zarathustrianism, ten days have been prescribed for the worship of the ancestors, and the last day of this worship is known as the 'Gāthā Vahishtāishti'. The similar day is called 'Sarvapitri Amavasya' by the Hindus. Obviously both Zoroastrians and the Hindus attach sanctity to that day<sup>1</sup>.

According to the Vedic tradition, the eleventh month of the year, Bhadrapad, is meant for the Śrāddha ceremony of the dead. The rituals of this ceremony bear a great similarity with the Iranian rituals in the chanting of prayers, in invoking of spirits and in desiring of boons and in offering the presentations<sup>2</sup>. When a Zarathustrian dies, a dog is brought into the presence of the dead. This rite is called "Sagdid", 'sag' is a Persian word, meaning a dog, 'did' seems to have been derived from the Sanskrit 'drishti', seeing. A similar rite is described in the *Rigveda*<sup>3</sup>.

The Upanayana ceremony of the Vedic Aryans, with the sacred skirt and girdle is similar to the Navjote ceremony of the Iranians<sup>4</sup>. Certain purificatory ceremonies prescribed in the Vedas and the *Avesta* are very similar. There are some coincidences, between the Vedic and the Avestan ceremonies. In the *Vendidad* we find the use of gomez or consecrated bull's urine for the purification of physical ailments, and even for spiritual uplift. Its comparison can be made with the Vedic use of urine of cow and other things for an almost identical purpose<sup>5</sup>.

A certain type of sacred grass, known to the Iranians as 'Baresma'<sup>6</sup> and to the Vedic people as 'Kush' or 'Darbha'<sup>7</sup> was used in both the Indian and Iranian faiths. The Indo-Iranian people were fond of drinking juice of the soma (haoma) plant, renowned for its efficacy and celebrated at length in the *Rigveda*<sup>8</sup> and *Avesta*<sup>9</sup>. There is a common conception in the cultic beverage of this plant in both the texts<sup>10</sup>. It was used for medicinal and spiritual purposes. The fascination for this juice prevailed before the time of Zarathustra and continued during his time<sup>11</sup>. Both the Avestan and the Rigvedic prayers were frankly offered for earthly goods<sup>12</sup>, both the people believed in sacrifices<sup>13</sup>.

1. Davar, *op. cit.*, p. 17.

2. *Ibid.*

3. Gupta, "The Veda and the Avesta", *Mod. Review*, Vol. LVIII, 1935, p. 259.

4. Davar, *op. cit.*, p. 17; Pandey, *Hindu Samskaras*, p. 112.

5. Davar, *op. cit.*, p. 18; Five products or *Pañchagavya* of the cow are: milk, curds, ghee, dung & urine.

6. *Vendidad*, XIV, 4.

7. *Rigveda*, II. 3.3-4 and X. 70.4.

8. *Rigveda*, IX.

9. *Yasna*, Chapters IX to XI.

10. Mukhopadhyaya, *History of Indian Medicine*, 1923, I. p. 189 f.

11. *Yasna*, XLVIII. 10; *Rigveda*, VII. 86.6.

12. Davar, *op. cit.*, p. 27.

13. Das, "Avesta from Hindu Point of View", *IC*, Vol. 15, p. 30.

Aspiration for long life and its enjoyment was the philosophy of life of the Indo-Iranian<sup>1</sup>. In the Vedas the sages asked for a hundred autumns of cheerful and happy life, and in the *Avesta*<sup>2</sup> Zarathustra also preached about the enjoyment of life.

The Indo-Iranians ate meat, particularly of animals offered as sacrifices to the gods. The meat of oxen was prepared as a special dish on festive occasions<sup>3</sup>. In a Vedic hymn, cow is referred to as sacred 'not to be killed'<sup>4</sup>. Among the Iranians the use of mutton was common and meat was the main article of their food, but like the Vedic Aryans they also seem to hold the cow as sacred and not to be slaughtered 'agnya'<sup>5</sup>.

### Similarity in Vedic and Avestan Legends

Another link has been supplied by the similarity of legends, which points to contacts between the two people, though the channels through which they moved, cannot be precisely determined. We may examine the relation between the legend of the Vedic Yama, son of Vivasyata<sup>6</sup>, and the Avestan Yima (Djamshid), son of Vivanghat. In the *Rigveda* we find the reference to Yama as the first man or sole existing mortal<sup>7</sup>. The same idea about Yima can be noticed in the *Avesta* also. Ahura Mazda conversed with Yima and ordered him to go forth and multiply<sup>8</sup>. The *Rigveda* preserved the latter aspects of the god and the designation "Lord of races" is used for Yama<sup>9</sup>. Both are connected with death. In both, the *Avesta* and the Vedas, dogs having four eyes, guard the path leading to the next world<sup>10</sup>.

Another similar legend is the legend of Trita, referred to in the Vedic literature. Thrita, son of Athwya, mentioned in the *Avesta* as the healer of disease, is identical to the Vedic Trita, son of Apatya to whom is assigned all threatened unpleasantness and calamity<sup>11</sup>. Thrita of the *Avesta* demolished Azi Dahaka, the Iranian personification of evil<sup>12</sup>. It has been suggested that Avestan Azi Dahaka is equal to Sanskrit Ahi Dasa<sup>13</sup> who is destroyed by Trita. The legend of the Vedic

1. Das, *op. cit.*, p. 29.

2. *Yasna*, 43.1.

3. *Rigveda*, X. 85. 13.

4. *Rigveda*, VIII. 90.15 'Aghnaya'. It, of course, does not mean that cow's meat was never taken but certainly it was not an item of everyday food.

5. *Yasna*, XXIX. 1.; 385. Also, Herzfeld, *op. cit.*, pp. 286-87.

6. *Rigveda*, X. 58. 1; X. 60.10.

7. *Rigveda*, X. 10.3.

8. *Vendidad*, II. 1.4.

9. *Rigveda*, X. 14. 1.

10. *Rigveda*, X. 14. 11; *Vendidad*, 19-29, 8-16.

11. Davar, *op. cit.*, pp. 21-22.

12. *Ibid.*, p. 21.

13. *Rigveda*, I. 32. 11.

demon Gandharva, slain by Indra<sup>1</sup>, has its counterpart in the Avestan monster Ganderewa, demolished by Keresaspa<sup>2</sup>. The mythology of Taimāta in the *Atharvaveda*, links with Mesopotamia, will be discussed later.

### Foreign Words in Vedic Literature

Some foreign words, occurring in the Vedic literature, also indicate India's contacts with foreign people, more especially with the Semitic people of Mesopotamia and the Middle East.

#### Words showing India's contact with Mesopotamian peoples

An important group of words used in the context of charm against snake poison in the *Atharvaveda* is apparently of Semitic origin. These are Āligī, Viligī<sup>3</sup>, Taimāta<sup>4</sup>, Urugūla<sup>5</sup> and Tābuva<sup>6</sup>. Tilak pointed out their foreign origin, especially the Sumerian and the Babylonian<sup>7</sup>, and held that Indians borrowed these words from ancient languages of Mesopotamia. Taimāta of the *Atharvaveda* is equivalent of Taimat or Taimatu of Babylonian language<sup>8</sup>. Āligī and Viligī are referred to in the *Atharvaveda* as the father and mother of serpents. According to Tilak, both the words are Akkadian in origin. Aligi has perhaps no corresponding name in any Semitic language but Viligi seems to tally with Bilgi, an ancient god in Assyrian mythology<sup>9</sup>. In Hindi there is a pair of words like Alāy-Balāy in which the first word has got no meaning. Perhaps, like this, Viligī only has meaning, and Āligī has no meaning at all. Excavations at Ur have brought to light a list of kings of Ur. In this list two names, Alalu and Belalu are mentioned as the names of kings<sup>10</sup>. These words are near to Āligī and Viligī<sup>11</sup>. The city of Ur seems to have been mentioned in the word 'Urugula'. The later part of this word, 'Gula', also means 'vaidya of serpent's poison' in Assyrian language<sup>12</sup>. The vogue of these words in Vedic literature suggests contacts of the Vedic Aryans with the Assyrians and

1. *Rigveda*, VIII, 66.5.

2. *Aban Yast*.

3. *Atharvaveda*, V. 13.7.

4. *Ibid.*, V. 13.6.

5. *Ibid.*, V. 13.8.

6. *Ibid.*, V. 13.10.

7. Tilak, "Chaldean and Indian Vedas", in *R. G. Bhandarkar Commemoration Volume*, pp. 29-42.

8. *Ibid.*

9. Agrawala, "Some foreign words in Ancient Sanskrit Literature", *IHQ*, Vol. 27, 1951, p. 2.

10. Carleton, *Buried Empires*, p. 90.

11. Upadhyay, *Bhartiya Kala Tatha Sanskrit Ki Bhumi*, p. 176.

12. *Ibid.*

Babylonians<sup>1</sup>. The word Urugula has, however, been interpreted differently in different contexts. Among the Babylonians, it stands for the goddess 'Gula', wife of Marduk<sup>2</sup>. In Akkadian, 'Urugula' means a 'big city'<sup>3</sup> and in Sumerian mythology, it was then abode of the manes in the underworld. The serpents belonging to the Subterranean regions have been designated as the progeny of Urugula<sup>4</sup>.

The word Tabuva means that which relates to Tabu, and it was perhaps an act of purification from a sin. It may be compared with the Semitic word Taubah. The effect of poison is spoken of as being neutralised by the Tabuva charm or cantation. Probably the word is of non-Sanskritic origin and is suggestive of some foreign contacts<sup>5</sup>.

The word "Uru kshiti" of the *Rigveda*<sup>6</sup> also seems to indicate some foreign contacts. According to some scholars<sup>7</sup>, "uru kshiti" is the name of some place in Mesopotamia. They have interpreted 'uru' as 'ur' and 'Kshiti' as 'kish' of Mesopotamia.

### The Similarity between the Vedic and Babylonian mythologies

The influence of Babylonian mythology can also be seen in the Vedic literature. The legend of the flood, preserved in the *Satapatha Brāhmaṇa*, corresponds to the Babylonian stories of the flood<sup>8</sup>. Manu, like Utnapishtim, is warned of the impending flood, advised to prepare a ship; and after the deluge goes to a mountain. Finally, after the deluge he offers sacrifice to the waters as Utnapishtim sacrifices to the gods<sup>9</sup>.

Indian and Babylonian, mythologies have similar demonology and the related phenomena of magic and sorcery. Names of the various demons and collections of incantations can be seen in both the Vedic literature<sup>10</sup> and the sacred texts of the Babylonians<sup>11</sup>. This is borne out by the following evidences. It was a general

1 Upadhyay, *op. cit.*, p. 176.

2. Agrawala, "Some foreign words in Ancient Sanskrit Literature", *IHQ*, Vol. 27, 1951, p. 2.

3. *Ibid.*

4. *Ibid.*

5. *Ibid.*, p. 3.

6. *Rigveda*, 7.100. 4.

7. Chattopadhyay, "Mohenjo-daro and the Aryan Colonization", *VII*, Vol. III, pt.I, 1965, p. 112; According to Chattopadhyay, Vedic Aryans migrated from India and found colonies at Uru-kshiti (Ur and Kish) in Mesopotamia.

8. Jairazbhoy, *op. cit.*, pp. 34-35; Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, 1914, p. 221.

9. Pusalker, *op. cit.*, p. 150.

10. Hopkins, *Religions of India*, p. 46.

11. Hooke, *Babylonian and Assyrian Religions*, p. 72.

belief among the Babylonians that civilization developed there after the hard struggle with the floods. Hence the origin-myths of Babylon were couched in terms of conflict with hostile powers personified as the Tiamat dragon or the Labbu monster<sup>1</sup>. The phenomenon of yearly floods in Babylon is seen as a recurring war between gods and demons. In the new year a festival was arranged and king assumed the role of Marduk and the demon was killed. Similarly in the Vedas Indra possesses the same status of hero and Vritra is the demon who is slain by Indra<sup>2</sup>. It has also been suggested that the legends were based on the economic factor<sup>3</sup>. The end of Indra-Vritra war<sup>4</sup> brought the thunderstorm and rains on which the Aryans were dependent for the purpose of agriculture, hence the connection of the legend with the rain god. In Babylon, the water of the Euphrates and Tigris was an important factor in their economy. It can be said that the rainy season led to the formulation of the 'Hero versus dragon' motif in the mythologies<sup>5</sup> of both the countries.

It was a general belief in India and Babylon that the evil spirits or demons were responsible for the body or mental illness of people<sup>6</sup>. They entered in body or attacked from outside. The demon 'Labasu' is described as the Seizer<sup>7</sup>. There are so many pieces of evidence in the Babylonian mythology which recall the features of the spirit, Grāhi<sup>8</sup>, who is said to seize the bodies of the people. In Babylon some diseases were also personified as is evidenced by the personification of plague which was designated as Namtar<sup>9</sup>. The spirit causing fever, the spirit of headache and the Asakku-demon causing paralysis—all these destroyed bodily and mental health by causing illness. The *Rigveda*<sup>10</sup> also mentions similar disease-demons such as the *Grahi*-spirit causing bad dreams. In the *Atharvaveda*<sup>11</sup> we come across a spirit who was mainly known for causing miscarriage or still birth or causing evil to women. In Babylon this spirit is known as Lamashtu<sup>12</sup>. In both the countries the tying of the

1. Hooke, *Babylonian and Assyrian Religions*, p. 10.

2. *Rigveda*, 3.34.3; 8.15.3; 8.78.7; 2.12.11.

3. Jacobson, *PIHC*, 26th quoted by Lahiri "Indian and Babylonian Demonology, a comparative study" in *VIJ*, Vol. IV, pt. II, p. 187.

4. *Rigveda*, 1.80.3.

5. Lahiri, "Indian and Babylonian Demonology, a comparative study", *VIJ*, Vol. IV, pt. II, 1966, p. 188.

6. *Ibid.*, p. 188.

7. Saggs, *The Greatness that was Babylon*, p. 314.

8. *Rigveda*, 10, 161.1.

9. Lenormont, *Chaldean Magic and Sorcery*, p. 36.

10. *Rigveda*, 10.161.1; 10.162.1; 10.164.1.

11. *Atharvaveda*, 8.6.2;3.4.9.

12. Saggs, *op. cit.*, pp. 304-39.

magical knots was considered as the only source of protection against these demons<sup>1</sup>.

In the mythology of both the countries, the idea prevailed that sometimes the illness was sent by gods to erring individuals by way of chastisement. In Babylon one such god who used to suspend protection and send the disease-demons, was Hea<sup>2</sup>. The same applies to the Vedic god Varuṇa<sup>3</sup>, who punished with disease those who neglected his worship. Rudra<sup>4</sup> is also mentioned as a god sending fever, cough and poison. The fire-god<sup>5</sup> is the enemy of demons in both the mythologies. Thus, as far as the demonology is concerned, these two peoples had much in common. However, the possibility of the independent origin of the two cannot be ruled out entirely.

### Evidence of Commercial Contacts

The above mentioned contacts developed in due course of time and for this the credit goes mainly to commercial and cultural intercourse between India and West Asia. Indian goods had been in demand in Western Asia. Commercial contacts can be dated to the Rigvedic period also, if the 'Paṇis'<sup>6</sup> of Vedic literature are taken to be identical with the Phoenicians<sup>7</sup>. However, according to some scholars, Paṇis were non-Aryans in the Indian society itself in the Rigvedic period<sup>8</sup>. According to this assumption, the Rigvedic trade was chiefly in the hands of the Paṇis and other Dasyus. The references to sea voyages in the *Rigveda* have been already discussed. According to some scholars it was the Paṇis and not the followers of the Aryan cult who braved the terrors of the deep sea and carried Indian goods to far off lands<sup>9</sup>.

### Archaeological Evidence

Pottery is generally regarded as the ABC of archaeology, and, therefore, archaeologists are often seen associating a group of pottery with a group of people. In a way it is correct, in a way it is not. It is likely to be correct when the pottery group is absolutely homogenous in form, fabric and decoration over the entire area

1. Hooke, *Babylonian and Assyrian Religions*, p. 44.
2. Lenormont, *Chaldean Magic and Sorcery*, p. 181.
3. *Rigveda*, 1. 122.9.
4. *Atharvaveda*, 11.2.22, 26.
5. Lenormont, *op. cit.*, p. 185; *Rigveda*, 13, 87.3-6; *Atharvaveda*, 5.29, 4-5; 6, 32, 1, 1, 28, 1-2, 18.2.28.
6. *Rigveda*, 1.124.10.
7. Malhotra, "Commercial Rivalry in the Indian Ocean in Ancient Times", *JASB*, (N.S.) Vol. 33, 1958, p. 129.
8. Macdonell & Keith, *Vedic Index of Names and Subjects*, Vol. II, p. 471.
9. Iyenger, "The Trade of India", *IHQ*, II., p. 38.

of its distribution but it may not be correct if there are marked differences in these respects. Thus, belonging to the 2nd millennium B.C., the supposed period of the original Aryans, of Asia Minor and parts of West Asia there are a number of ceramics<sup>1</sup>—the hand-made polychrome Cappadocian Ware; the wheel-made monochrome red or black burnished ware of the Hittites; Khirbet Kerak Ware of the late 3rd millennium B.C. generally associated with the movement of people in Anatolia and Palestine, sometimes called Proto-Hittites; light red ware with black paintings called Habur Ware; dark pottery with paintings in white called, Nuzi Ware, and associated with the Mittanians—but none of these wares occurs in India (Fig. 69). Similarly, there are a number of plain grey wares in Iran, Central Asia and northwest India which are also said to have been associated with the upheaval of a new people, the Aryans, and their movement into India but none of them could be definitely associated with the known, contemporary Indian ceramics. At Tepe Hissar<sup>2</sup>, Tepe Giyan<sup>3</sup> and Shah Tepe<sup>4</sup>, a plain, burnished grey or black ware suddenly appears in an otherwise continuing red or grey painted pottery tradition. Although Allchin<sup>5</sup> feels that the Indian Neolithic—Chalcolithic burnished Grey Ware was associated with this ware, particularly one from Shah Tepe (Pl. XVII b), yet, as has been already indicated in Chapter IV, not all scholars agree with him<sup>6</sup>. At Sialk also in Cemeteries A and B, a plain grey ware occurs<sup>7</sup>. Another grey ware occurs at Anau<sup>8</sup> and other places in south Turkmenia, USSR, but all of them neither form a single tradition nor their traditions entered into the Indo-Gangetic plains. Recent discovery of a plain grey and plain red ware in Gandhara Graves<sup>9</sup> (Fig. 62) also does not help us much since, as already indicated in Chapter IV, although they have definite parallels at Hissar and other places in northern Iran and Central Asia, they have absolutely no parallels in the Indian mainland<sup>10</sup>. All that the occurrence of these plain grey wares shows is that there was a wide-spread intrusion of peoples in sites located in the area from northern Iran to the western bank of the Indus in the Swat Valley region and many of them used a variety of plain grey wares. Whether they were the Aryan people or not is a moot point, but they were certainly not the Vedic people

1. Welkar, "The Painted Pottery of the Near East in the 2nd millennium B. C. and its Archaeological background", *Transactions of the American Philosophical Society*, NS, Vol. 38, 2 (1948).
2. Schmidt, *Excavations at Tepe Hissar, Damghan*.
3. Contenau, and Ghirshman, *Fouilles du Tepe Giyan pres de Nehavend 1391 et 1932*.
4. Arne, *Excavations at Shah Tepe, Iran*.
5. Allchin and Allchin, *op. cit.*, p. 168.
6. Gupta, *Disposal of the Dead and Physical Types in Ancient India*, p. 122.
7. Ghirshman, *Fouilles du Tépé Sialk*.
8. Pumpley, *Explorations in Turkestan prehistoric civilizations of Anau I and II*.
9. Dani, "Timargarha and Gandhara Grave Culture", *AP*, Vol. III.
10. Gupta, *op. cit.*, 168-9.

people of the earlier periods since they destroyed the graves of the latter people in order to make their own. The concept of homogenous Aryan people coming to India from about 1500 B.C. is, therefore, not at all there. Secondly, Dani, the excavator, takes the peoples of all the three phases as Aryan, the different waves of the Aryan people. Obviously, the late date of Period III and the archaeological snags come in the way to accept the Gandhara Graves people as Aryans. Anthropology, let it be admitted, has also not solved the problem.

To conclude, therefore, in the absence of any authentic archaeological evidence to prove or disprove the connections of the Vedic Aryans with the ancient Iranian or Central Asian peoples of the remote past we have to depend solely on the literary data for purposes of working out a hypothesis in which the possibilities may be framed in. The hypothesis starts with the basic concept of Indo-European group of languages. According to this concept, the root of all the languages of this group lies at a single place, may be in Russian Central Asia or in the Caucasus or in northern Iran. The branches of the parent languages, as they are now available in India and Iran both, were at one time somehow got mixed up with ethnic groups, particularly by the writings of Max Müller, and others. It may, however, be pointed out that philologists are not at all unanimous over the terms 'Aryan' and 'Indo-European' since while the former is used variously in the context of language race and nobility, the latter is considered clumsy as also inappropriate. That is why Gordon Childe made a plea to supplement the linguistic evidence with archaeological and anthropological, which, as Thapar has shown, has also so far not yielded the desired results. Similarly, the basic assumption of ethnic migrations under pressures of population growth and tribal upheavals, has also not been fully and perfectly known. The sheet-anchor of this theory is the Hittite inscription of Boghaz Kōi dated to 1360 B.C. in which some of the Vedic gods, like Indra, Mitra, Varuna, occur as witnesses to a war-treaty between the Hittites and Mittanians. These gods also occur in the *Avesta*, the sacred book of the Iranians. Although the evidence cannot totally be ignored yet it cannot be presented as a sufficient argument in favour of any effective cultural contacts between India and Iran in the middle of the second millennium B.C.

The date of the *Avesta* is itself somewhat controversial. According to an opinion it has to be dated in the sixth century B.C. and not earlier. If that is so, the references to India in the *Avesta*, which occur at least at four places are not surprising since the Persians had by then already conquered a portion of the Punjab. Vendidad refers to sixteen fine places of which 'Haptahidu' is the fifteenth. The Haptahidu may easily be identified with Sapta-Sindhu which is the Punjab. The *Avesta* also mentions a mountain called 'Us-Hindva' which means "Beyond India". It may either be the Hindukush or some other range of the Himalaya. According

to some scholars, however, the date of *Avesta* goes back to the middle of the 2nd millennium B.C. In that case, there may be some possibility of Irano-Indian contacts, however, indirect they may have been. The matter, in any case, has to be sub-judice at present. The difficulty arises from the fact that although on the table lands of Iran, Afghanistan and northern Baluchistan, i.e., in areas nearer India, Aryan languages appear to have continued even after 1400 B.C. (In Asia Minor they got succumbed to local dialects) yet no written records of these languages are available until about the sixth century B.C. Unfortunately, archaeology and anthropology also do not help us much.

Scholars have also referred to certain passages in the *Atharvaveda* which contains words of Semitic origin. If they are really so we may visualize the situation in which not only the Iranians but also the Mesopotamians had something to do with India's contacts with her neighbours although at this stage we may not be in a position to indicate the exact process of the Indo-Mesopotamian relations during the Vedic period, except probably those which we have dealt with in Chapter IV which deals with the archaeological material of the post-Harappan Chalcolithic cultures in India and Iran.

Similarly, scholars have also pointed out the shadow of Babylonian mythology and demonology in the Later Vedic literature. We are not in a position to pin point what it was due to contact or parallel development.

Commercial contacts between India and West Asia are likely to have been maintained by the Vedic Panis. However, their identification is somewhat less secured than what we would like it to be. At the end, we may say that although, there are sufficient linguistic grounds to visualize Indo-West Asian contacts in the Vedic period as a whole, yet in the absence of any definite archaeological and anthropological evidence we are unable to visualize the exact nature of the process involved in the relationship.

## THE PERIOD OF THE EPICS

The *Rāmāyaṇa* and the *Mahābhārata* contain some interesting evidence of India's contacts with and/or knowledge of several countries in the distant past. They also embody several references indicating contact of the kingdom of the Indo-Gangetic plain, the original Āryāvarta, with the civilized and semi-civilized peoples living in other parts of the Indian sub-continent. The evidence from the epics bearing on these contacts has formed part of the chapters of the dissertation although due to the reasons listed below it might have been thought better to include this evidence in the Appendices.

Firstly, it is generally agreed that the two epics, including probably the Vālmīki *Rāmāyaṇa*, according to some authors, underwent several redactions and interpolations, and hence they, in the present form, cannot be assigned to any definite dates<sup>1</sup>. Secondly, both of them in their present form contain numerous episodes some of which do not appear to be fully consistent with the central themes of the two epics. Thirdly, none of them seems to have been written by a single individual. Finally, there seems to be internal stratification within the texts themselves, e.g., Jacobi has suggested four different strata for the *Mahābhārata*: (i) the development of the story, (ii) the origin of the epical poem, (iii) the fixing of the epical corpus by the sūtas, and (iv) the incorporation of didactic parts<sup>2</sup>, the oldest being the first and the latest the fourth.

Recently, Sankalia has added a new dimension to the subject by looking at the literary evidence contained in the *Rāmāyaṇa* from the archaeological and botanical

1. While according to Sankalia, *Rāmāyaṇa* is older than *Mahābhārata*, according to Lal it is true only as far as their compilation is concerned, the historical events, if they are the realities, have the reversed sequence, as was also proposed earlier by several scholars, including H. Raychaudhury. V. V. Mirashi has, however, given support to Sankalia by saying that literary evidence supported the traditional belief that Krishna (of the *Mahābhārata*) flourished long after Ram (of the *Rāmāyaṇa*). Sankalia, *Rāmāyaṇa : Myth or Reality*, p. 1-3; Lal, *Statesman*, 7th Oct., 1975; Mirashi, *Statesman*, 14th Oct., 1975.
2. Jacobi, quoted by Winternitz, *A History of Indian Literature* Vol. I, Part II; *The Popular Epics and the Puranas*, pp. 273-420.

points of view<sup>1</sup>. Similarly, Lal has made an attempt to correlate the literary data and the indirect evidence obtained from archaeological excavations<sup>2</sup>. An attempt has been made below to identify a number of places and peoples mentioned in the two epics throwing light, directly or indirectly, on the contacts of the kingdoms of the Indo-Gangetic plain with the rest of India as well as with the countries outside India. The chronological and ethnological factors have been taken into consideration in making these identifications. We have also made a reappraisal of different theories regarding the reality of the epic events.

### THE RĀMĀYANA

The Kiṣkindhākāṇḍa contains the largest number of references to the places and peoples. When Sita was abducted by Rāvaṇa, Sugriva ordered his men to go in every direction to find her out. The places mentioned by Sugriva in his instructions to his men contained names of a large number of seas, mountains, lands and peoples. Some of the geographical place-names mentioned are: Laṅkā, Yavadvīpa<sup>3</sup>, Suvarṇadvīpa<sup>4</sup>, Samudradvīpa<sup>5</sup>, Land of Koṣakoras<sup>6</sup>, Kṣirodasāgar<sup>7</sup>, Rśabha Parvata<sup>8</sup>, Śvetaparvata<sup>9</sup>, Jalodasāgara<sup>10</sup>, Devasakhā<sup>11</sup>, Kraunca<sup>12</sup>, river Šailoda<sup>13</sup>, a country where the Ghandharvas, Kinnaras, and others live<sup>14</sup>, mountainous region beyond which was the northern ocean<sup>15</sup>, Lohitasāgara<sup>16</sup>, and the land of Mandehas<sup>17</sup>. The epic also refers to several ethnic groups, like the Śakas, Kambojas, Kirātas, Yavanas<sup>18</sup> (Fig.74 A).

The identification of the places and peoples is a fascinating subject of study for historians. Of all the places mentioned above, probably the identification of Laṅkā has been attempted by the largest number of Indian and foreign Indologists, and opinions vary considerably. About the identification of other places also, scholars are hardly unanimous. In the circumstances, we have divided our treatment in two parts : Part A contains the different views of the authors on individual items, while Part B contains the discussion on them, of course, only in generalized terms since in our frame of reference—India's contact with the outside world—no detailed discussion of any single item is called for.

1. Sankalia, *Ramayana : Myth or Reality*, p. 50.

2. Lal, "Archaeology and the two Indian epics", *ABORI*, Vol. LIV (1973), pp. 1-8. Also *Statesman*, dated 7th Oct., 1975.

3. KSK, 40, 28-31.

4. *Ibid.*

5. *Ibid.*, 40, 36.

6. *Ibid.*, 40, 23.

7. *Ibid.*, 40, 43.

8. *Ibid.*, 40, 44.

9. *Ibid.*, 40, 44.

10. *Ibid.*, 40, 47-48.

11. *Ibid.*, 43, 16-18.

12. *Ibid.*, 43, 25-27.

13. *Ibid.*, 43, 37-39.

14. *Ibid.*, 43, 49-51.

15. KSK, 43, 53-54; 56-58.

16. *Ibid.*, 40, 38-42.

17. *Ibid.*

18. *Ibid.*, 43, 12-14; Bālkāṇḍa 54-21; 55.3,

## PART—A

**Identification of Laṅkā : Different views**

Vader<sup>1</sup> locates Laṅkā on the equator, stating the present Maladi Vas to be the Rāksasdvīpa. According to Misra<sup>2</sup>, Laṅkā may be located on the portion of the Bay of Bengal which washes the shores of the northern part of the present day Andhra Pradesh. Daniel John<sup>3</sup> is of the opinion that Rāvaṇa's Laṅkā was an island in the midst of the sea, off the southern or south-eastern coast of the island of Ceylon. Kibe<sup>4</sup>, in a number of articles, seeks to establish that Laṅkā was located in Central India in the region of Amarkantaka. Hira Lal<sup>5</sup> also supports this view, Ghosh<sup>6</sup> also feels that in ancient times there existed in the border of Madhya-deśa a region called Laṅkā. Sankalia<sup>7</sup> also locates Laṅkā in Central India, in the Vindhya hills. V.V. Mirashi vehemently opposes this identification<sup>8</sup>. *Rāmāyaṇa*, as said earlier, contains instructions given by Sugriva to Hanuman and other *Vānaras* as to how, and where, to search for Sita<sup>9</sup>. It also gives the details of the movement of Rāvaṇa as described by Suparshva in the Āraṇyaka. All these places, including Laṅkā, were situated south of Chitrakūta and north of the Narmada; significantly enough, Narmada, except once in an interpolation, was never mentioned in the *Rāmāyaṇa*. This is the region formed by the Chota Nagpur plateau<sup>10</sup>. According to Sankalia<sup>11</sup>, the reference to śāla trees in the *Rāmāyaṇa* is a very important clue in the identification of Laṅkā. The fight between the *vānaras* and *rākshasas*, or amongst the *vānaras* themselves the *vānaras* invariably uproot a śāla tree and use it as a stick. Rama also proves his prowess and capacity to kill Bali by shooting seven śāla trees with one arrow<sup>12</sup>. Similarly, when Hanuman's rampage in Laṅkā was ultimately checked by Indrajit, Rāvaṇa's eldest son, by tieing him with the magical

1. Vader, "Situation of Rāvaṇa's Laṅkā : On the Equator", *IHQ*, II, pp. 345; 350.

2. Misra, *Mahakosala Hist. Society's Papers*, Vol. 1.

3. Daniel John, Rāvaṇa's Laṅkā, *ABORI*, XXI, pp. 270-279.

4. Kibe, "Rāvaṇa's Laṅkā located in Central India", *IHQ*, IV, pp. 694-702; "Further Light on Ravana's Lanka located in Central India from Valmiki's *Rāmāyaṇa*", *ABORI*, XVII, pp. 371-384; "Ramayana and Laṅka," by T. Paramshiv, Reviewed by Kibe, *ABORI*, XXII, pp. 123-127.

5. Hira Lal, *The Comm. Vol.*, pp. 151-161.

6. Ghosh, "Note on Rāvaṇa's Laṅkā located in Central India", *ABORI*, XIX, pp. 84-86.

7. Sankalia, *Ramayana : Myth or Reality*, pp. 4-8.

8. Mirashi, *Statesman*, 14th Oct., 1975.

9. KSK, *ARK*.

10. Sankalia, "The (Original) Ramayana or Archaeology and the Ramayana", *Indologentagung*, 1971, pp. 156-159.

11. *Ibid.*; *Ramayana : Myth or Reality*, pp. 4-8.

12. *Rāmāyaṇa* : 4.11. 47-49.

and invisible Brahmarshi, then the other *rakshases* in their ignorance tried to tie him more securely with *sana*, *chira* and other natural fibres. Where do we find these trees and plants, asks Sankalia<sup>1</sup>. *Sana* and *Chira* grow so plentifully and *śāla* trees figure so frequently in the Chota Nagpur plateau that, according to Sankalia, the author of this epic could not ignore their presence. Further, a study of the botanical literature shows that the *śāla* (*Shorea robusta*) grows only Mahalorala, Chota Nagpur plateau and Assam<sup>2</sup>. Obviously since Assam's geography does not fit in well, Lankā must be located somewhere in the Mahalorala-Chota Nagpur plateau region, and, conversely, it must not be identified with Sri Lanka where *śāla* never grew. According to Sankalia, another point<sup>3</sup> which goes against the identification of Lankā with Sri Lanka (Ceylon) is that the area around Rāmеш्वराम is low-lying and sandy. There is no stone there. Hence Rāma and his *vanara* bands could not have built a stone causeway there. Moreover, the distance between Rāmеш्वरām and Sri Lanka (Ceylon) is so large that nobody could think of building a bridge across it. Sardar Kibe<sup>4</sup> has also pointed out that since the *rāga* referred to as a *rasa* or ocean in the *Rāmāyaṇa* was only 100 *yojanas* in extent, it could only be a small lake or river. Sankalia also supports<sup>5</sup> this view and feels that the *rāgata* of the epic could be, at best, a large lake. It may be mentioned that there are many natural lakes in and around Jabalpur, and in Eastern Madhya Pradesh. Thus according to Sankalia, the Lankā is likely to have been somewhere in Chota Nagpur plateau in eastern Madhya Pradesh, most probably, near Jabalpur<sup>6</sup> (Fig. 74B). Nibikanta Sastrī<sup>7</sup>, however, regrets all these identifications of Lankā and holds that the account of Lankā in the *Rāmāyaṇa* is based on legends.

These conflicting views on the subject show that it is difficult to locate the Lankā of the *Rāmāyaṇa* exactly, but if it is identified with Sri Lanka (Ceylon), we may presume that there was close intercourse between India and Sri Lanka in those days.

### Svarnadvīpas

In the same (Kirkindhā) kāṅḍa<sup>8</sup>, while describing the countries of the east to his emissary, Sugriva refers to Yavadespa, Suvarnadvīpyakadvīpa and Samudra-

1. Sankalia, *Ramayana : Myth or Reality*, pp. 4-5.
2. Sankalia, "The Ur (Original) Ramayana or Archaeology and the Ramayana", *Indo-International*, 1971, pp. 156-159.
3. *Ibid.*
4. Kibe quoted by Sankalia in *Ramayana : Myth or Reality*, p. 43.
5. Sankalia, *Ramayana : Myth or Reality*, pp. 4-5.
6. Sankalia, "The Ur (Original) Ramayana or Archaeology and the Ramayana", *Indo-International*, 1971, pp. 156-159.
7. Sastrī, in *Ramalinga Reddy Comm.*, Vol., Part II, pp. 20-24.
8. KSK, 40, 28-31.

dvīpa. Yavadvīpa has been identified with the island of Java<sup>1</sup> and Suvarṇadvīpa with modern Sumatra. Ptolemy<sup>2</sup> used the Sanskrit name of Java, and also its Greek equivalent, and some writers refer to it as 'Barley Island'. According to Alberuni<sup>3</sup>, Indians sometimes designated the Malaya Archipelago by the general name 'Suvarṇadvīpa', the area contains the islands of Java and Sumatra.

### Kosakaras

Sugriva also asks one of his envoys to go to the land of 'Kosakaras'<sup>4</sup> in search of Sita. Mookerji has identified this land with China<sup>5</sup>. The term has been interpreted as indicative of the land where there is to be found the worm which yields threads of silk, and, it is well-known that from ancient times only China was famous for its silk. It is significant to note that several silk garments from as far back in time as second century B.C. have been recovered from Lou-Lan in Chinese Central Asia.

### Kṣīrodsāgara

Further, Sugriva asks Vinata, another envoy, to go to Kṣīrodsāgara<sup>6</sup> (milk ocean). This *sāgra* has been identified with the Caspian Sea, which was called by Marco Polo as Sirwan ('Kṣīra' in Sanskrit, and 'Sira' in Persian mean milk). In the midst of this sea stood the great white Rsabha mountain<sup>7</sup>. This mountain seems to be the same as Śvetadvīpa of the *Mahābhārata*<sup>8</sup>. According to Buddha Prakash, the Śveta Parvata of the *Rāmāyaṇa* and the Śvetadvīpa of the *Mahābhārata* both may recall the countries of Transcaspiana near the Caspian Sea<sup>9</sup>.

### Jalodasāgara

Another sea, called Jalodasāgara<sup>10</sup>, situated to the east of the Kṣīrodsāgara,

1. Mookerji, *Indian Shipping*, p. 56; Dey, *Geographical Dictionary of Ancient and Medieval India*, p. 215.
2. Mookerji, *op. cit.*
3. *Ibid.*
4. KSK, 40, 23.
5. Mookerji, *op.cit.*, pp. 55-56.
6. KSK, 40-43.
7. KSK, 40, 44.
8. MBH, *Śanti Parva*, 322, 25; 337-14; It states that the sage, Narada used to go to Śvetadvīpa to worship Nārāyaṇa. Śvetadvīpa is also mentioned in the *Harṣacarita* and *Kādambarī* of Banabhatta. *Harṣacharita* (ed. Parab, 5th ed.), pp. 59, 216, 258; *Kādambarī*, (ed. P. L. Vaidya), p. 229,
9. Buddha Prakash, *India and the World*, p. 219; Grierson identified Śvetadvīpa with Alexandria while Kennedy holds the view that Śvetadvīpa was Bactria and the region of Issikkul. According to Buddha Prakash, the association of Śvetadvīpa with Kṣīrasāgar (Caspian) shows that the regions near the Caspian sea are intended here.
10. KSK, 40, 47-48.

has also been mentioned. It has been located in the east of the Caspian Sea<sup>1</sup>. The passage also speaks of a golden hill at a distance of thirteen *Yojanas* from this sea, in front of which lay a dragon having a thousand hoods clothed in blue garments. It is mentioned that all the gods worshipped him. There was a golden palm tree, which served as the banner of the dragon-god. This reference to the dragon reflects the traditional belief in the dragon-ancestor current among the people of the Oases-states of Central Asia<sup>2</sup>, particularly that of Kucha. Hiuen-Tsang also refers to this tradition<sup>3</sup>. The legends of the dragons of Kucha in a slightly altered form occur in the 'Yeou-Yang-tsa-tsou' of about 860 A.D., wherein reference is made to an ancient king of Kucha, named A-tchou-ul, who tamed a dragon living in the northern mountain for his mount<sup>4</sup>. Sylvain Levi<sup>5</sup> maintains that the name of the king Kin-houa or 'golden flower' exactly corresponds to the name of king of Kucha, Suvarṇapuspā (sou-fu-po-kiue), who died in 619 A.D. But, according to Lüders<sup>6</sup>, there was another Suvarṇapuspā who ruled at an earlier date. The existence of Suvarṇapuspā long before the 7th cent. is proved by the designation of a famous temple of Kuca 'Kin-hua-sseu' (Suvarṇapuspavihāra)<sup>7</sup>.

In the kingdom of Kucha there was a lake in the mountainous region which was associated with a legendary dragon. The reference to the dragon-god in *Rāmāyāna* in a region located to the east of the Kshīrodsāgara, sometimes identified with Caspian Sea, recalls the legends of the dragons of Kucha<sup>8</sup>. Hiuen T'sang says that this region was rich in gold. The name of its legendary King Suvaraṇapuspā (flower of gold) and his association with the dragons of the legends probably led to the formation of the myth of the dragon in the region of golden trees and mountains occurring in the *Rāmāyāna*.

1. Buddha Prakash, *India and the World*, p. 220.

2. *Ibid.*, pp. 220-223.

3. Beal, *Buddhist Records of the western world*, Vol. I pp. 20-21. "To the north of a city on the eastern borders of the country, in front of a deva temple, there is a dragon lake. The dragons changing their form, couple with mares. The offspring is a wild species of horse (dargon horse) difficult to tame and of a fierce nature. This country become famous for its horses.... In later times, there was a king, called "Gold flower" who was able to yoke the dragons to his Chariot... From very early times till now there have been no wells in the town, so that the inhabitant, accustomed to get water from the dargon-lake".

4. Wei-Shu 101 la cited in Paul Pelliot, "Tokharien et Koutcheen", *Journal Asiatique* (1934), p. 171 quoted by Buddha Prakash in *India and the World*, p. 221.

5. Sylvain Levi, "La 'Tokharien B' langue de Koutcha," *Journal Asiatique* (1913), II, pp. 319-320, quoted by Buddha Prakash, in *India and the World*, p. 221.

6. Hermann Lüders, *Weitere Beiträge zur Geschichte und Geographic von ost turkestan*, p. 26, quoted by Buddha Prakash in *India and the World*, p. 222.

7. Bunyiu Nanjio, *A Catalogue of the Chinese Translation of the Buddhist Tripitaka*, No. 402.

8. Buddha Prakash, *op. cit.*, p. 223.

## Devasakhā

At the time of describing the routes of the North to his envoy Śatabala, Sugriva tells him to reach the mountain named 'Devasakhā'<sup>1</sup> (friend of the gods), which is full of several kinds of birds, and is adorned with variegated trees, and also enriched with golden forests. This mountain, lying beyond the Himalayas, can be identified with the T'ien-shan mountain<sup>2</sup>. In Chinese, 'T'ien' denotes the heavenly and divine power. Its Indian equivalent is 'deva'. After reaching this mountain, the envoys crossed the empty spaces<sup>3</sup> of hundreds of yojanas, which had no hills, rivers, trees, or human habitation. This description fits in with the steppes of Central Asia in the north of T'ien-Shan which extend over the whole of Jungaria<sup>4</sup>.

## Kraunca mountain

After crossing this place, the envoy had to reach the Kraunca mountain<sup>5</sup>. The name of this mountain, according to *Mahābhārata*<sup>6</sup>, has been derived from the Krauncadvīpa. The *Pūrāṇas*<sup>7</sup>, it is interesting to note, speak of a tribe of the Kraunchas. It may also be mentioned that a river of Sinkiang Province of China is known as 'Konce Darya'<sup>8</sup>. There has been a belief current in the past amongst the local people in Central Asia that they were the offspring of a bird-woman or kinnari<sup>9</sup>. A somewhat similar tradition is also current about the Wu-Sun tribe<sup>10</sup>. 'Kraunca', as the name of a tribe, supports the tradition of the descent of a people from a bird-woman. However, Dey<sup>11</sup> identifies Kraunca mountain with a part of Kailash mountain, at the base of which lake Manasarovara is situated.

## Śailoda

In Kiskindhākāṇḍa<sup>12</sup>, a river, called Śailoda, is mentioned on whose banks bamboos (kicaka) grew in plenty. The *Mahābhārata*<sup>13</sup> refers to it as lying between

1. *KSK*, 43, 16-18.

2. Buddha Prakash, *op. cit.*, p. 223. This is shown by the following example. The name Arhat Devasina is translated as T'ien kwan (army of the gods); Indra, the king of god is referred as T'ien-ti, and India, the land of gods, is known at T'ien-Chu. Thus 'Devasakhā parvata' is an exact translation of T'ien Shan.

3. *KSK*, 43-19.

4. Buddha Prakash, *op. cit.*, p. 224.

5. *KSK*, 43, 25-27

6. *MBH*, VI, 12, 7.

7. Dey, *op. cit.*, p. 104; *Taittirīya Āraṇyaka*, I, 31,2.

8. Buddha Prakash, *op. cit.*, p. 225.

9. *Ibid.*

10. Bagchi, *India and Central Asia*, pp. 138-139.

11. Dey, *op. cit.*, p. 104.

12. *KSK*, 43, 37-38.

13. *MBH*, II, 52, 2-7.

the mountains of Meru Mandara, which are generally identified with the Pamirs and the mountain-chains bordering the upper Irrawaddy<sup>1</sup>. Sailoda is further identified with Sillas or Silias of Megasthenes and Curtius<sup>2</sup>. Pargiter locates it in western Tibet<sup>3</sup>, while Sylvain Levi<sup>4</sup> has identified it with the Khotan river. A country, famous for its gold and jewels, is said to have been situated in the neighbourhood of the Šailoda river<sup>5</sup>. This region reminds us of the Maṇikāñcanavarṣa of the *Mahābhārata*<sup>6</sup>. It should be noticed that Andarab, Badakhshan and Kakhan were famous for their silver mines in ancient times<sup>7</sup>. One such mine has been found at twenty miles from Ishkashm in the Ghagan region on the southern bank of the Oxus. Rubies and sapphires of Badakhshan also drew the attention of Marco Polo<sup>8</sup>, and, according to Ghirshman<sup>9</sup>, they were used by Yue-chis who inhabited this region. There is a reference in the *Rāmāyaṇa* probably of this region where precious stones abounded.

### Bhadrāśvavarṣa, etc.

Sugriva refers to a country where the gandharvas, kinnars, siddhas, nagas and vidyadharas of bright colour enjoyed the company of girls. The atmosphere there echoed with melodies of vocal and instrumental music. The *Mahābhārata* also refers to these characteristics, of the people of Bhadrāśvavarṣa. According to some scholars, these countries mentioned in the *Rāmāyaṇa*, were most probably, Kucha and Khotan in Central Asia. These were the great centres of performing-arts in the ancient period as is evidenced from innumerable antiquities (terracottas, stuccos, painted panels, etc.) recovered from them<sup>10</sup>. The *Rāmāyaṇa* also speaks of a mountainous region beyond which was the Northern Ocean. The sun did not shine there and the horizon was lighted by the brightness of a golden mountain, called Somagiri<sup>11</sup>. The *Mahābhārata*<sup>12</sup> refers to this region as Airavatavarṣa. Some scholars hold that the description seems to fit in with the known features of the Arctic Ocean and the snow-

1. Sylvain Levi quoted by Buddha Prakash in *India and the World*, p. 226.

2. Megasthenes and Curtius quoted by *Ibid.*, p. 227.

3. Pargitar, (trs), *Mārkandeyapurāṇa*, p. 351.

4. Sylvain Levi 'Ptolemée, Le Niddesa et la Bṛhatkatha', *Études Asiatiques* (1925), Vol. II, pp. 41-42.

5. KSK, 43, 38-40.

6. MHB, VI, 11, 26.

7. Barthold, *Turkestan down to the Mongol invasion* II, p. 65.

8. Buddha Prakash, *op. cit.*, p. 228.

9. Ghirshman, *Begram, Recherches archéologiques et historiques sur les kouchans*, p. 60.

10. Stein, *Ancient Khotan*.

11. KSK, 43, 53-58.

12. MBH VI, 8, 10-11.

covered countries of northern Asia, as, in this region, the sun is not visible for months, and a light, known as *aurora borealis*, illuminates the atmosphere<sup>1</sup>.

### Lohita Sāgara

Sugriva also refers to an ocean of red water, known as 'Lohita Sāgara' where 'Garuda resides in his nest, made of variegated jewels, on a towering Salmali tree, and the ferocious mountain, like the raksasas, called Mandeha, dwelling on the cliffs, plunge into the sea at sunrise, and unable to bear the heat, jump again to the hills'<sup>2</sup>. It has been suggested by Buddha Prakash that Lohita Sāgara refers to the present day Red Sea, the Channel, separating the coast of Arabia from Africa<sup>3</sup>. Law<sup>4</sup>, on the other hand, is of the opinion that Lohita stands for the great tributary which meet the river Brahmaputra in the district of Sadiya. Dey<sup>5</sup> takes it as the river Brahmaputra itself. In this connection we may also consider the location of the land of the Mandehas, a tribal people who lived near the Lohita Sagar. If Lohita Sagar has to be identified with Red Sea then their land must have been on the north-eastern coast of Africa, i.e., somewhere in Somaliland. Sylvain Levi<sup>6</sup> has brought to our notice an indirect evidence to locate the land of the Mandehas. 'In the *Purāṇas*', he says, 'a group of Sudras, known as Mandehas, lived in an island called Kuśadvīpa. Kuśa occurs in the epigraphs of some Iranian kings'<sup>7</sup>. According to Buddha Prakash, Kuśa of these inscriptions probably stands for Ethiopia<sup>8</sup>. According to Sircar, the country of Kuśa, after which the Puranic Kuśadvīpa appears to have been named, was situated somewhere in north-eastern Africa beyond Egypt<sup>9</sup>.

1. Sircar, *Cosmography and Geography in Early Indian Literature*, p. 59; Raychaudhuri, *Studies in Indian Antiquities*, p. 75; Buddha Prakash, *op. cit.*, p. 233.

2. KSK, 40, 39-42. *Rāmāyaṇamanjarī* of Ksemendra also gives a description of the Mandehas. *Kiṣkindhākāṇḍa*, vs. 221—228. This Red-sea ocean is regularly referred to in the geography of the Purāṇas; *Harivāṁśapurāṇa*, 225. 1834.

3. Buddha Prakash, *op. cit.*, pp. 239-241.

4. Law, *Historical Geography of Ancient India*, p. 232.

5. Dey, *op. cit.*, p. 115.

6. Sylvain Levi, Pour 'histoire du Ramayana', p. 90, quoted by Buddha Prakash in *India and the World*, p. 241.

7. Sukumar Sen, *Old Persian Inscriptions*, p. 114; In the Hamadan Inscription, Susa and Persepolis Inscriptions of Darius Kuśa country is referred to.

8. Buddha Prakash, *op. cit.*, p. 241. From the Egyptian records it is clear that the Kashites of Ethiopia were a race cognate with the Egyptians. They belonged to a race of the Caucasian-Caspian stock, that entered Africa in early times.

9. Sircar, *Cosmography and Geography in Early Indian Literature*, p. 51.

### Tribal Peoples and the Yavanas

The *Rāmāyana* also makes mention of a number of tribes and other peoples, e.g., Malechhas, Pulindas, Bharatas, Kurus, Madras, Kambojas, Kirātas, Śakas and Yavanas. Some of them, e.g., the Śakas and Kambojas were undoubtedly the nomadic hordes of Central Asia. The term Yavana, referred to in several passages of this epic, stands mainly for the Greeks, particularly the Indo-Greeks.

### Kaikeyi

Davar<sup>1</sup> is of the opinion that Kaikeyi was an Iranian princess, the daughter of King Aśvapati, ruler of the kingdom of Kekaya which was situated on the eastern border of Iran. He supports<sup>2</sup> his point further on the basis of the etymology of the word 'Kaikeyi', which, according to him, is of Iranian origin; the word 'kaya' was a well-known prefix of the names of Kayani kings of Iran (cf. Kaiquabad, Kaikobos, Kaikhsru, etc.). According to him, one more evidence lends support to his view; when Bharata returned from the place of his maternal grand-father Aśvapati, he brought a number of gifts including woollen garments and the skins of antelopes, which may be typical Iranian products. Law<sup>3</sup>, however, identifies Kekaya with the present district of Shahpur in Punjab; while Cunningham<sup>4</sup> identifies the capital of Kekaya with Girjak or Jalalpur on the Jhelum. Vyas<sup>5</sup> says that it was a country lying between the rivers Beas and Sutlej.

## PART—B

### Discussions and Conclusions

The identification of the different places to which Sugriva refers with locations in Africa, Central Asia, Tibet, Indonesia and Sri Lankā is a mere guess work. The Vālmiki *Rāmāyana*, as stated above, in its present form seems to be the result of several reductions it has undergone during the last several centuries of its existence.

It has not been possible to fix the date of the first text of the epic, although it seems possible that the core of the 'Kāvya' was written in the pre-Buddha period. We are hardly in a position to decide the dates of later additions in the *Rāmāyana*. Sankalia has, however, tried to determine the stratification of the *Rāmāyana* on the basis of the correlation of the archaeological data with the literary references. He claims to have established at least one point: that the episode in the epic relating to

1. Davar, *op. cit.*, p. 46.

2. *Ibid.*

3. Law, *Historical Geography of Ancient India*, p. 98.

4. Cunningham, in Pargiter's articles "Ancient Cedi, Matsya and Karūsa", *JASB*, 1895, 249-258.

5. Vyas, *India in the Ramayana Age*, p. 327.

Hanuman in which he acts as a messenger of Rama, taking an inscribed finger-ring with the name of Rama to Sita in Lanka, was written in the early centuries of the Christian era or a few centuries before that, since archaeological evidence shows that the rings of this style came into use in India only after the arrival of the Indo-Greeks. The core of the *Rāmāyaṇa*, according to him, goes back to the period of Copper Hoards—Chalcolithic culture-complex of the first half of the second millennium B.C. On the basis of botanical studies, including that of paleo-Botanical data, Sankalia concludes that the Laṅkā of the *Rāmāyaṇa* could not be Śrī Laṅkā of today. As mentioned earlier the Laṅkā of the *Rāmāyaṇa* is known for the Śāla trees. The vānaras, i.e., monkeys, who attacked the palace of Rāvaṇa, are said to have uprooted those trees and used them in the battle as weapons of warfare. Obviously, Laṅkā must be a place where Śāla trees are grown. And botanically it is true that the Śāla trees are not found anywhere in south of the Narmada. Sankalia has likewise cited some other evidence, e.g., the route followed by Rama while going from Ayodhya to Laṅkā, to show that the locale of the *Rāmāyaṇa* story was probably the region between the river Sarayu in the Uttar Pradesh and the Narmada in Madhya Pradesh.

The arguments of scholars like Buddha Prakash, Davar and others who tried to identify some of the geographical names occurring in the *Rāmāyaṇa* with Ethiopia, Red Sea, Iran, Caspian Sea and Central Asia, do not appear to be very sound. In case their identifications are valid, it would appear that these names of various far-flung and outlying areas were later interpolations. Archaeological evidence shows that between 1500 B.C. when the Harappan Culture came to an end, and 4th century B.C., when Alexandar invaded India, our knowledge of Egypt, Africa, Red Sea, Caspian Sea, Chinese Central Asia, etc., was extremely limited. From all that we know both from the archaeological sources and literary data we can very well say that the *Rāmāyaṇa* was not conceived in the Harappan times since the Harappa Culture itself, in all probability, was the non-Aryan and also pre-Aryan culture. If the core of the *Rāmāyaṇa* was composed in the period between 1500 B.C. and 400 B.C. then it has to be admitted that the Kiṣkindhākāṇḍa, in which most of the names of the regions identified with foreign countries occur, was finalized in or soon after the 4th century B.C. when our knowledge of these countries grew through cultural and personal contacts. Further, most of the original names of places and peoples are still in vogue and, therefore, their identification with the sites located within the boundaries of India, appear quite convincing.

Lal's theory<sup>1</sup> is slightly off the point since his problem is more archaeological than cultural and historical. For him the basic question at the moment is to identify an artefactual assemblage recovered from the earth which could be associated

1. Lal, "Archaeology and the two Indian Epics", *ABORI*, Vol., LIV, 1973, pp. 6-8.

with the people of the *Rāmāyaṇa* age. To him there are two fixed points—(i) the Harappan assemblage is admittedly non-Rāmāyaṇian, mainly because of the area of distribution of this assemblage which includes Gujarat, Sind and Punjab, not mentioned in the Epic, and (ii) the Painted Grey Ware which, again on distributional grounds, is non-Rāmāyaṇian (to him it is of the Mahābhārata Age). There are only two alternatives available to us—either the Late Harappan Assemblage is Rāmāyaṇian or the OCP- Copper Hoard Assemblage. For the Late Harappan also distributional pattern of the assemblage is the main hurdle—it covers the Punjab, Harayana and western Uttar Pradesh while the locale of the *Rāmāyaṇa* was central Uttar Pradesh and beyond. To him, therefore, the claim of the OCP-Copper Hoards is the only valid claim although archaeology does not seem to prove it<sup>1</sup>. In a sense he may be right since the occurrence of this assemblage in central Uttar Pradesh has been established beyond doubt although not at Ayodhya, the capital town of Rama. However, it must be pointed out that the concentration of this assemblage is in western Uttar Pradesh, Rajasthan and Bihar, the areas which are beyond the actual scene of the *Rāmāyaṇa*. Similarly, the regions of Rewa and Mahakoala which were important in the *Rāmāyaṇa*, have not yielded so far any evidence of the OCP-Copper Hoard Assemblage. Obviously, Lal's theory is plausible but not proven. More work needs still to be done. Recently, he has revised his opinion. He places it after 800 B.C.<sup>2</sup>.

## Section II—Mahābhārata

The *Mahābhārata* is generally regarded by scholars as the encyclopaedia of ancient Indian episodes and lores. It also incorporates rules and instructions of great r̥sis ordaining the rightful conduct and deeds of several powerful kings. This epic was not written exclusively with a view to give us the details about the social condition of the Hindus, geographical knowledge of the author or relations of India with other countries. Thus, whatever information we are able to glean from this epic, especially from *Ādiparva*, *Sabhāparva*, *Śāntiparva*, *Āranyakaparva* and *Bhīṣmaparva*, about the geographical set-up of the country, or the close cultural and biological contacts between one region and the other, as also between India and her neighbours, is incidental. The author or the authors of this epic name several countries, mountains, rivers, etc., at a number of places but without any sequence

1. In *Statesman*, op. cit., Lal asserts that his recent excavations at Ayodhya and Srингverpur, the two important sites associated with the *Rāmāyaṇa* story, have not yielded any OCP-Copper Hoard assemblage, instead they have some late Painted Grey Ware sherds in their lowest levels which shows that these sites were not occupied before 800 B. C. It means, the *Rāmāyaṇa* age is later than the Mahābhārata age which is placed round about 1200—900 B.C.
2. *Ibid.* Also, Gupta and Ramachandran, (Eds.) *Mahābhārata : Myth and Reality : Differing Views.*"

and direction in which the countries or mountains lay. This attitude towards the geography of the country has created serious difficulties in identifying not only the distant countries but also different regions within the country itself. These difficulties result in the proper assessment of the extent of contacts between one region of the country and the other, as well as between India and her neighbours.

In any case, the geographical allusions in the *Sabhāparva* and the identifications of the names of various tribal republics and monarchies which appeared at the time of the *Rājasūya* sacrifice to pay tribute to Yudhisthira are however, important from our point of view. After establishing the capital at Indraprastha Yudhisthira was desirous to celebrate the great *Rājasūya* sacrifice and, therefore, he asked his four brothers to conquer the countries in all the four directions. Arjuna, Bhima, Sahadeva and Nakula were sent respectively towards the North, East, South and West. Each one of them returned to the capital after conquering the countries, mountains, rivers and tribes, which lay in his allotted direction. The detailed description of these conquests is preserved in the '*Digvijayaparva*' which is a sub-section of the *Sabhāparva*. *Upāyanaparva* refers to the names of those countries and tribes whose representatives came to pay tributes to the Pandavas at the time of the *Rājasūya* sacrifice. Both these sub-sections of *Sabhāparva* provide a lot of information about the national geography, and interregional contacts. But it does not mean that other sections of this epic are silent either about the geography of the country or about the inter-regional contacts. *Śāntiparva*, *Bhīṣmaparva*, *Ādiparva* and *Āranyakaparva* also contain some valuable information on these subjects. The names of several countries and tribes, mentioned in this epic (especially those occurring in the *Sabhāparva*, connected with the victory and *Rājasūya* sacrifice of the Pandava brothers) are given below. The context in which they are mentioned, throw some light on the contacts of India with them.

Daradas<sup>1</sup>, Kāmbojas<sup>2</sup>, Paramakāmbojas<sup>3</sup>, Lohas<sup>4</sup>, Rṣikas<sup>5</sup>, Paramarśikas<sup>6</sup>, Yavana<sup>7</sup>, Pahlavas<sup>8</sup>, Kirātas<sup>9</sup>, Śakas<sup>10</sup>, Harahura<sup>11</sup>, Ramaṭha<sup>12</sup>, Tukhāras<sup>13</sup>, Kaṅkas<sup>14</sup>, Cīnas<sup>15</sup>, Hūṇas<sup>16</sup>, Odra<sup>17</sup>, Antākhī<sup>18</sup>, Yavanapur<sup>19</sup>,

1. *Sabhāparva*, 24.22; 42, 12.

2. *Ibid.*, 24-22; *Udyogaparva*, III, 186, 30; *Bhīṣmaparva*, IX, 373; *Mahābhārata*, XII, 207, 43; 102, 5.

3. *Sabhāparva*, 24.24. 4. *Ibid.* 5. *Ibid.* 6. *Ibid.*

7. *Ibid.*, 28.44; 29.15; *Śāntiparva*, 65.13; *Dronaparva*, 7.41; *Śāntiparva*, 102, 5.

8. *Sabhāparva* 48.14. 9. *Sabhāparva*, 48, 8; 26, 13; *Āranyakaparva*, 141, 25.

10. *Udyogaparva*, 4.15; *Sabhāparva*, 48, 15; 47, 26.

11. *Sabhāparva*, 12, 47, 19; III, 48, 21; *Śāntiparva*, 65, 2430.

12. *Ibid.*

13. *Sabhāparva*, 47, 26.

14. *Ibid.*

15. *Ibid.*, 47, 19; 23, 19.

16. *Ibid.*, 47, 19.

17. *Ibid.*

18. *Ibid.*, 28, 49.

19. *Ibid.*

Romā<sup>1</sup>, Citraka<sup>2</sup>, Lohajangha<sup>3</sup>, Parad<sup>4</sup>, Kitava<sup>5</sup>, Dvyaksu<sup>6</sup>, Haimvatas<sup>7</sup>, Sailoda<sup>8</sup>, Taṅgaṇa<sup>9</sup>, Parataṅgaṇa<sup>10</sup>, Kayavya<sup>11</sup>, Vaiyamakas<sup>12</sup>, Vālhika<sup>13</sup>, Siṁhala<sup>14</sup>, Śakadvīpa<sup>15</sup>, Sita, river<sup>16</sup>, Kṣirodsāgara<sup>17</sup>, Śvetadvīpa<sup>18</sup>, Kraunchadvīpa<sup>19</sup>, Nārāyaṇasakhā Parvata<sup>20</sup> (Fig. 75).

Let us try to identify each one of them. Arjuna during his expedition conquered Daradas<sup>21</sup>, Kāmbojas, Paramakāmbojas, Rṣikas, and others. Daradas were also present at the time of *Rājasūya* sacrifice<sup>22</sup>.

### Dardas

According to Moti Chandra<sup>23</sup>, Dardas are the people of Dardistan<sup>24</sup>, which includes all the countries lying between the Hindukush and Kaghan. Biddulph<sup>25</sup> is of the opinion that the word 'Darad' itself got its origin in the Persian word 'dued'.

### Kāmbojas

The identification of Kāmboja is of great importance. Various notices of Kāmboja can be gleaned in Indian literature and Sanskrit inscriptions<sup>26</sup>. In the *Mahābhārata* the people of Kāmboja are mentioned along with several different tribes. In the *Udyogaparva*<sup>27</sup> they are mentioned along with the Śakas, Pulindas and Yavanas; in *Sabhāparva*<sup>28</sup> along with the Dardas; in the *Bhiṣmaparva*<sup>29</sup> along with Cinas. Śāntiparva<sup>30</sup>, *Anusāsanaparva*<sup>31</sup>, *Dronaparva*<sup>32</sup>, and *Karṇaparva*<sup>33</sup>, also refer to the Kāmbojas. The *Mahābhārata* also refers to the siege of Mathura by the Yavanas and Kāmbojas<sup>34</sup>. In the *Sabhāparva* it is mentioned that the horses, cows, camels, chariots, clothes made of sheep's wool and lynx furs, shawls, skins, blankets, etc.

- |  |                                       |   |
|--|---------------------------------------|---|
| 1. <i>Sabhāparva</i> , 28.49.  | 2. <i>Ibid.</i> , 46, 21.             | 3. <i>Ibid.</i> , 46, 21.                 |
| 4. <i>Ibid.</i> , 47, 61, 10, 48, 12.  | 5. <i>Ibid.</i> , 47, 10              | 6. <i>Ibid.</i> , 47, 15.                 |
| 7. <i>Ibid.</i> , 47, 19.  | 8. <i>Ibid.</i> , 48.2.               | 9. <i>Ibid.</i> , 48. 3.                  |
| 10. <i>Ibid.</i>   | 11. <i>Ibid.</i> , 48.12              | 12. <i>Ibid.</i>                          |
| 13. <i>Ibid.</i>   | 14. <i>Ibid.</i> , 48, 30.31.         | 15. <i>Mahābhārata</i> VI, 12, 9, 33, 36. |
| 16. <i>Ibid.</i> , 12.30.  | 17. <i>Ibid.</i> , 8, 15.             | 18. Śāntiparva, 322, 25; 337. 14.         |
| 19. <i>Mahābhārata</i> , VI, 12, 7.  | 20. <i>Ibid.</i> , 4.                 |   |
| 21. <i>Sabhāparva</i> , 24.22.   | 22. <i>Ibid.</i> , 48, 12.            |   |
| 23. Moti Chandra, <i>Geographical and Economic studies in 'Mahābhārata'</i> , <i>Upāyanaparva</i> , p. 86.   |                                       |   |
| 24. Leitner, <i>The languages and races of Dardistan</i> , Part II, pp. 45-48.   |                                       |   |
| 25. Biddulph, quoted by Moti Chandra, <i>op. cit.</i> , p. 86.   |                                       |   |
| 26. Yaska II, I, 3, 4; <i>Anguttara Nikaya</i> I, p. 213; IV 222, 256, 261; <i>Manuśmṛti</i> X 43-44; <i>Hariśaṃsa</i> , XIII 763-64, 775-83; Hultsch : CII, Vol. I, <i>Asokan Inscriptions</i> , p. 87. |                                       |   |
| 27. <i>Udyogaparva</i> III, 186, 30.   | 28. <i>Sabhāparva</i> , 24.22.        | 29. <i>Bhiṣmaparva</i> , IX. 373.         |
| 30. Śāntiparva, 65.13.   | 31. <i>Anusāsanaparva</i> , 68.21;    | 32. <i>Dronaparva</i> 7.14.               |
| 33. <i>Karṇaparva</i> , 94.16.   | 34. <i>Mahābhārata</i> , XII, 102, 5. |   |

were brought by the Kāmbojas as the choicest items of presentation to Yudhis-thira<sup>1</sup>. It appears that the Kāmbojas were a very important people during the Mahābhārata period. Their identification is, however, somewhat doubtful. Different scholars identify them with different peoples in different parts of India. Lassen<sup>2</sup> places the Kāmboja country, with some doubt, in the south of Kashgar and east of modern Kafiristan. Sylvain Levi<sup>3</sup> identifies it with Kafiristan itself. According to Jayachandra Vidyalankar,<sup>4</sup> it should be identified with Badakshan and the Pamirs and Moti Chandra<sup>5</sup> is inclined to accept this view. The etymology of the word Kāmboja indicates that they originated in the country known as Kum<sup>6</sup>. It suggests the identification of the Kāmbojas with the people of the mountainous region between the Oxus and Jaxartes, and beyond...<sup>7</sup> According to Bagchi<sup>8</sup>, the Kāmbojas belonged to Central Asia, beyond the Himalayas, but the exact region is still unidentified. However, Rhys Davids<sup>9</sup>, and Roychaudhuri<sup>10</sup> never agreed to these identifications. Rhys Davids placed the Kāmbojas in the north-west of India with Dvaraka as their capital. Roychaudhuri, on the other hand, placed them in Rajapura, in the Kashmir Valley. It may also be noted that a number of scholars connected them with the Iranians. The Paramakāmbojas<sup>11</sup> have been identified by Jayachandra Vidyalankar<sup>12</sup> with the Galcha speaking Yaghnobis who live in the Valley of Yaghnob at the head-waters of the Zarafshan river, a tract of country considerably to the north of the Pamirs and separated by the hill states subordinate to Bokhara. He has, however, not stated the reasons for his identification. There are many more theories in this regard but they need not be enumerated since all the existing theories clearly show the inability of the historians to identify the Kāmbojas in exact terms.

### Lohas

The Lohas<sup>13</sup> were also an important people. According to Moti Chandra<sup>14</sup>, they must have been settled in the country which is represented now by the Tadzhik

1. *Sabhāparva*, 47, 4; 45, 20; 47, 3; 45, 19.
2. *Ind. Alt. Map*.
3. *J. A. 1923.*
4. Vidyalankar, *Bharat Bhumi aur uske nivasi*, pp. 297-305.
5. Moti Chandra, *op. cit.*, pp. 37-38.
6. Seth, "Central Asiatic Provinces of the Mauryan Empire", *IHQ*, Vol. XIII, 1937, p. 400.
7. *Ibid.*
8. Bagchi, "The Role of Central Asian Nomads in the History of India", *JOGIS*, Vol. X, No. 2, 1943, p. 109.
9. Rhys Davids, *Buddhist India*, p. 184.
10. Roychoudhuri, *L'Iconographic Bouddhique*, p. 134.
11. *Sabhāparva*, 24,24.
12. Jayachandra Vidyalankar, *op. cit.*, p. 313.
13. *Sabhāparva*, 24,24.
14. Moti Chandra, *op. cit.*, p. 19.

Soviet Socialist Republic, which, till recently, was divided in the Hussian Wakhan, Shighnan, Roshan and Darwanz, etc.

### Rṣikas and Paramarṣikas

The Rṣikas<sup>1</sup> and Paramarsikas<sup>2</sup> have been mentioned after the Lohas. They have been identified with Yue-chi and Ta-Yue-Chi respectively by several scholars.<sup>3</sup>

### Yavanas

Of all the peoples, probably the Yavanas have been mentioned most frequently; *Sabhāparva*<sup>4</sup> mentions the conquest of the Yavanas by Nakula. The same parva<sup>5</sup> records that ambassadors were sent to the countries of the Yavanas. Sahadeva sent an embassy to Yavanapur<sup>6</sup> (the city of the Yavanas), which has been identified with Alexendria,<sup>7</sup> and to Antakhi<sup>8</sup> which has been identified with Antioch.<sup>9</sup> If these identifications are correct we are led to believe that there were some definite diplomatic contacts between India and Greek colonies. *Śāntiparva*<sup>10</sup> clearly states that foreigners like the Yavanas, Kiratas, and others were present in India. On an occasion Mandhata asks Indra : "what duty should be performed by these foreigners". *Śāntiparva*<sup>11</sup>, *Dronaparva*<sup>12</sup>, *Bhīṣmaparva*<sup>13</sup> and *Karṇaparva*<sup>14</sup> also refer to the presence of Yavanas during that time. This epic<sup>15</sup> also refers to the siege of Mathura by the Yavanas and Kambojas. The name of a brave Yavana, named Dattamitra,<sup>16</sup> also occurs in the epic. It is well known that the term Yavana has been used for the Greeks.<sup>17</sup> The Pahlavas are mentioned along with the Vastrapas in the *Sabhāparva*.<sup>18</sup> But who were the Vastrapas? The Vastrapas have sometimes been placed in Girnar region of the old Junagadh State in Gujarat.<sup>19</sup> If this identification is correct, some

1. *Sabhāparva*, 24.24.

2. *Ibid.*

3. Moti Chandra, *op. cit.*, pp. 12-16; Buddha Prakash, *op. cit.*, p. 243.

4. *Sabhāparva*, 28.44.

5. *Ibid.*, 28.49.

6. *Ibid.*, 28.49.

7. Buddha Prakash, *op. cit.*, p. 33.

8. *Sabhāparva*, 28.49.

9. Buddha Prakash, *op. cit.*, p. 33; Moti Chandra, *op. cit.*, pp. 25-27.

10. *Śāntiparva*, 65.13;

11. *Ibid.*, 207.43;

12. *Dronaparva*, 7.41.

13. *Bhīṣmaparva*, 75.21.

14. *Karṇaparva*, 94.16.

15. *Śāntiparva*, 102, 5.

16. *Mahābhārata*, VIII, 45, 36.

17. Sircar, "Yavana and Parsika", *JIH*, Vol. 14, 1935, pp. 35-36; Buddha Prakash, *op. cit.*, p. 295; Ghosh, "Some Additional Notes on Foreign elements in the Hindu polulation", *ABORI*, Vol. XII, p. 167; Banerjee, "Foreign Elements in Neo-Brahmanic Society", *JBORS*, Vol. 41, p. 155.

18. *Sabhāparva*, 48. 14.

19. Moti Chandra, *op. cit.*, p. 104.

Iranian colony should have been in the vicinity of Junagadh of which we have no knowledge. However, some circumstantial evidence helps us in locating the foreigners near Girnar. The case of Minister Suvissakha (the son of Kulaipa, Pahlava) who was the governor of Anarta and Surastra in the time of Mahaksatrapa Rudradaman<sup>1</sup> and who was personally responsible for stopping a breach in the Sudarśana lake clearly shows that the Pahlava community wielded considerable influence in Kathiawad. Pahlavas might have been settled in Gujarat and Kathiawad because of the commercial intercourse between the Persian Gulf and Western India<sup>2</sup>.

### Kirātas

The Kirātas<sup>3</sup> are also frequently mentioned in the *Mahābhārata*, particularly along with the Cīnas. Different scholars place them in different regions. According to Moti Chandra<sup>4</sup>, the term 'Kirāta' implies a native of Kirātadeśa on the mountainous country lying between Dudkosi and Karki river in Nepal. From the description of the *Upāyanparva*<sup>5</sup> it seems that the Kirātas were living on the slopes of the Himalayas, by the side of the Varsa, and who were also supposed to be the Lauhityas. Varisa could be located in eastern Bengal and identified with the modern Berisal of Backergunj District<sup>6</sup>. Lastly, they are said to be living on the Lohita which can be identified with River Brahmaputra flowing in Bengal and Assam<sup>7</sup>. The reference to Kirāta's wealth of gold, silver, gems, sandal and textile clearly shows that they might be associated with the regions of Suvarṇadvīpa<sup>8</sup>. Thus, the connection of the Kirātas with the Cīnas indicates the fact that the Indians came to know of the Chinese people through the eastern routes and that they always considered them as an eastern people, having affinities with the Kirātas, who were of the Indo-Mangoloid group, inhabiting the Tibeto-Burman regions and also the Himalayan and East-Indian territories. The term Kirāta is a derivation from Kiranti or Kirati, the name of a group of people living in eastern Nepal<sup>9</sup>.

### Śakas

The Śakas have also been referred to repeatedly. Thus, *Sabhāparva*<sup>10</sup>

1. *Ep. Ind.*, VIII, 46-7.
2. Campbell, *Bombay Gaz.*, Vol. I, part I, p. 25.
3. *Sabhāparva*, 26, 9; *Bhīṣmparva*, V, 584; *Vanaparva*, 177, 11, 12, 13; *Sabhāparva*, 48 8; *Aranya-parva*, 141, 25.
4. Moti Chandra, *op. cit.*, p. 84.
5. *Sabhāparva*, 48, 8.
6. Moti Chandra, *op. cit.*, p. 85.
7. *Ibid.*
8. *Ibid.*
9. Chatterji, "Kirata-Jana-krti the Indo-Mongoloids their contribution to the history & culture of India", *JRAS Bengal (letters)*, Vol. XVI (1950), p. 169.
10. *Sabhāparva*, 29.15.

speaks of the victory of Nakula over them. *Udyogparva*<sup>1</sup> mentions that the Śakas fought on the side of the Kurus. *Āryanyakaparva*<sup>2</sup>, *Sabhāparva*<sup>3</sup>, *Śāntiparva*<sup>4</sup>, *Anusāsanaparva*,<sup>5</sup> *Dronaparva*<sup>6</sup> and *Karṇaparva*<sup>7</sup> mention the Śakas along with the Yavanas, Kirātas, Gandharas, Cīnas, Pahlavas, Kambojas, and others, with a little variation in the names of the tribal peoples. The Royal Śakas led a kind of life which other tribes and peoples under them also shared<sup>8</sup>. Undoubtedly, the Śakas originally belonged to Central Asia and from there they migrated to India when the Yue-Chi tribe had forced them<sup>9</sup> to leave the 'country'. All these references bear witness to the presence of these tribes in India of the times of the epics.

### Hārahūra

Hārahūra and Ramatha both are referred to together in the *Mahābhārata*<sup>10</sup>. These are presumably the two countries located outside the western boundaries of India. Hārahūra of *Mahābhārata* is the same as Harahuraka of *Arthaśāstra*<sup>11</sup> which was famous for the grape wine. Hem Chandra<sup>12</sup> gives the synonyms for grapes as draksa, mrdvika and harahura. Grape is not an Indian fruit and formerly it was sold by the Afghan vendors from Kabul. According to Varahamihira<sup>13</sup>, this country should be contiguous with the country of the peoples of the Indus basin and Madra. Jayachandra Vidyalankar<sup>14</sup> is of the opinion that it should be identified with Kandhara, while Moti Chandra<sup>15</sup> locates it in Herat as it is famous for grapes.

### Ramatha

Ramaṭha means asafoetida. It appears that this represents the name of the country where asafoetida is produced. It is produced out of a medicinal plant, found mainly in south Persia, Baluchistan, Afghanistan, Bokhara and in Chenab Valley<sup>16</sup>. Thus Ramaṭha should be located somewhere in these regions. Levi<sup>17</sup>

1. *Udyogparva*, 158.20.
2. *Āryanyakaparva*, 186, 29-30.
3. *Sabhāparva*, 47.26.
4. *Śāntiparva*, 65.13; 207.43.
5. *Anusāsanaparva*, 68.21.
6. *Dronaparva*, 7.14.
7. *Karṇaparva*, 94.16.
8. *Mahābhārata*, VI, 12.36.
9. Bagchi, *India and Central Asia*, p.44.
10. *Sabhāparva*, 29.11; 47, 19; *Āryanyakaparva* 48, 21; *Śāntiparva*, 65, 24-30.
11. Kautilya's *Arthaśāstra*, 2.25.
12. *Abhidhāra-cintamani*, V, 1155.
13. *Bṛihāt Saṁhitā*, XIV, 33.
14. Jayachandra Vidyalankar, 'Nakula Ka Pashachimi Digvijaya' in *Ojha Commemoration Volume*, p.8.
15. Moti Chandra, *op.cit.*, p. 66.
16. *Ibid.*; Jayachandra Vidyalankar, *op. cit.*, p.8.
17. *J.A.*, Jan., Feb., 1918, p. 126, quoted by Moti Chandra, *op. cit.*, p.66.

places it between Ghazni and Wakhan. According to Moti Chandra<sup>1</sup>, it should be identified with Kharan district of Kalat State, which grows asafoetida in great quantity and is adjoining Harat and Kandhar, and it appears that, by and large his view is correct.

### Tokharas and Kaṇkas

The people of Tukhāra or Tokhara<sup>2</sup> are referred to alongwith the Kankas, Cinas, Hūṇas and Śakas. Tokharas were probably a component tribe of the great Yue-Chi<sup>3</sup>. Kaṇkas<sup>4</sup> may probably be identical with Kang-Kiu, the residents of Sogdiana<sup>5</sup>. For some time the Kang Kius remained under the political supremacy of the Yue-Chi and Hiung-nu<sup>6</sup>.

### Cinas

Cīna has also been referred to in the *Mahābhārata*. It appears that the term 'Cīna' stood more for the Chinese people than for China as a country. These references, therefore, throw some light on the nature of the contacts between the Indian and the Chinese peoples. The following evidence may be cited in this respect. In the *Sabhāparva*<sup>7</sup> king Bhagadatta of Pragjyotisa or Assam was surrounded by the Kirātas and the Cīnas. They are also mentioned as forming the retinue of Bhagadatta, the king of Assam<sup>8</sup>. In the *Bhīṣmaparva*<sup>9</sup> it is recorded that the corps of the Kirātas and the yellow coloured Cīnas in the army of Bhagadatta appeared like a forest of *Karnikaras*. The *Vanaparva*<sup>10</sup> speaks of the arrival of the Pandava brothers in the country of the Kirata king Subahu, after crossing the country of the Cīnas in the course of their trek through the Himalayan territory, north of Badari. In the *Sabhāparva*<sup>11</sup> also the Cīnas have been referred to alongwith the Hūṇas and some Himalayan peoples. Thus, the Cīnas may be taken as the people of southern China, or, with a less possibility, the people of Upper Burma<sup>12</sup>. Some scholars, however, still take Cīna as China<sup>13</sup>.

1. Moti Chandra, *op. cit.*, p. 66.
2. *Sabhāparva*, 47, 26.
3. Moti Chandra, *op. cit.*, p.23.
4. *Sabhāparva*. 47,26.
5. Hirth, "The story of Chang K'ien, China's Pioneer in Western Asia", *JAOS*, 1917, p. 96.
6. *Ibid.*
7. *Sabhāparva*, 26. 9.
8. *Ibid.* 23, 19.
9. *Bhīṣmaparva*, V, 584.
10. *Vanaparva*, 177, 11, 12, 13.
11. *Sabhāparva*, 47. 19.
12. Moti Chandra, *op. cit.*, p. 61.
13. Panikar, *India and China*, p. 11; Bagchi, *India and China*, p. 7; Dikshitar, "Southern India and China", *SIS* II, p. 159.

## Hūṇas

The Hūṇas are also mentioned alongwith Cīnas, particularly in the *Sabhāparva*<sup>1</sup>. For chronological reasons it appears that one should not identify them with the Hūṇas whose invasion was repulsed in the Gupta period. They should rather be identified with the Hiung-Nu<sup>2</sup> who lived in Mangolia and who drove away the Ta-Yue-Chi from their country on the northern foot of Nan-Shan mountain, in the last quarter of the first millennium B.C.

## Romā

A reference to 'Romā' in *Mahābhārata* also deserves our attention. The term 'Romā' in *Mahābhārata* has been interpreted as the country of the Romans<sup>3</sup>. This is possibly correct as will be discussed in the chapter on the Mauryas. It is well-known that India had close contacts with the Roman world from at least the Mauryan times, i.e., the 3rd cent. B.C. *Sabhāparva* gives details of the 'Dīgvijaya' of Saha-deva, where it is clearly mentioned that Indian envoys were active at Antioch and Rome, as also in the city of the Greeks, probably, Alexandria<sup>4</sup>. Through their diplomatic activities, he was able to create circumstances to conquer them. Further the *Sabhāparva*<sup>5</sup> speaks of the arrival of the Roman envoys at the time of the *Rājasūya* sacrifice to present gifts to Yudhisthira. Moti Chandra gives another suggestion regarding this particular reference of India's contacts with the Roman world. According to him<sup>6</sup>, it is possible that the Indians who had frequent intercourse with the Seleucids of Syria, were acquainted with the name of Rome, and, perhaps, also with its growing power, and, therefore, the author of the *Mahābhārata* could not restrain himself from adding the name of Rome in the conquests of the Pandavas. Whatever might have been the case, it proves beyond doubt that the Indians were familiar with the Romans, if not with the city of Rome.

## Citraka

Citraka as a land is mentioned in the *Sabhāparva*<sup>7</sup>. It may be identified with the modern Chitral state in Dir, Swat Valley, and Chitral Agency with an area of 4500 sq. miles. It comprises the whole of Kashkar-bala or upper Kashkar. On the north stands the Hindukush range, on the west Badakshan and Kafiristan; on the south Dir, and on the east the Gilgit Agency, Mastuj and Yasin.<sup>8</sup>

1. *Sabhāparva*, 47, 19.
2. Noble, *Central Asia, the Connecting Link Between East and West*, p.6.
3. Mookerji, *Indian Shipping*, p. 130; Moti Chandra, *op. cit.*, p. 24.
4. *Sabhāparva*, 28. 49.
5. *Sabhāparva*, 28. 51.
6. Moti Chandra, *op. cit.*, p. 27.
7. *Sabhāparva*, 46.21.
8. Moti Chandra, *op. cit.*, p. 45.

### Lohajaṅghas

A people living in Lohajaṅgha<sup>1</sup> has also been referred to in the *Mahābhārata* but no information is available regarding their locale. They may be identified with the people living in the Lojar valley in the south of Kabul<sup>2</sup> whose principal city Locharna has been mentioned by Ptolemy<sup>3</sup>.

### Pāradas

*Upāyanaparva*<sup>4</sup> refers to the Pāradas at least two times. Once it places them to the west of the Indus<sup>5</sup>, and next it links them with Bahlikas or Bactrians<sup>6</sup>. It is possible that Ptolemy's Paradene<sup>7</sup>, and *Mahābhārata*'s Paradene included all the interior countries in Gedrosia. On the basis of their association with the Bahlikas, they can be identified with the parthians<sup>8</sup>, a nomadic tribe of Central Asia.

### Kitava

*Sabhāparva*<sup>9</sup> further refers to a tribe known as Kitava, who, most probably lived in Makran, particularly in the Kej basin. The Kej valley<sup>10</sup> lies between Kolwa and Mand, and the valley of Buleda. The Kitavas are invariably mentioned along with the Ulukas<sup>11</sup> who can be identified with the Kulutas or the people of modern Kullu valley. Therefore, Kitavas should represent the people of modern Suket.<sup>12</sup> However, the identification is still tentative.

### Dvyakṣas

The *Mahābhārata*<sup>13</sup> also refers to the land of the Dvyakṣas which is perhaps modern Badakashan, whose identification largely depends upon the etymology of the word Badakashan. It appears to be the Persianized form of Dvyakṣa. Interestingly enough, both mean the same, 'two eyed'<sup>14</sup>.

1. *Sabhāparva*, 46, 21.

2. Moti Chandra, *op. cit.*, p. 48.

3. Cunningham, *Ancient Geography*, p. 44.

4. *Sabhāparva*, 47, 61, 10, 48, 12.

5. *Ibid.*, 47, 9.

6. *Ibid.*, 48, 12.

7. *Geography*, VI, 21, 4.

8. Moti Chandra, *op. cit.*, p. 53.

9. *Sabhāparva*, 47, 10.

10. Moti Chandra, *op. cit.*, p. 55.

11. *Mahābhārata* 1, 177, 20; 56, 23.

12. Moti Chandra, *op. cit.*, p. 55.

13. *Sabhāparva*, 47, 15.

14. Moti Chandra, *op. cit.*, p. 58.

## Haimavatas

*Sabhāparva*<sup>1</sup> also refers to the Haimavatas. They are connected with the Himavanta which is famous place mentioned in Buddhist literature. This name was applied by the Greeks first, to the Hindukush and the Himalayas, and then to the Bolor range<sup>2</sup>. It, for ages, formed the boundary between China and Turkestan. The presentations brought by the Haimavatas during the Rajasuya also throw some light on foreign products, namely the fabrics manufactured in Vahlika and Cina<sup>3</sup>. Some fabrics were made of wool of the ranku goat's hair<sup>4</sup>. These ranku goats were probably the same as the 'rang goat' of the steppes of the high Pamir plateau<sup>5</sup>. Occasionally, Chinese silk was also brought in the this area for marketing.

## Śailoda

River Śailoda<sup>6</sup> of this epic appears to be the same as the river Śailoda of the *Rāmāyaṇa*<sup>7</sup>. Its identification and details have already been referred to in the section on the *Rāmāyaṇa*.

## Some Tribal Peoples

The *Sabhāparva*<sup>8</sup> also refers to the Taṅgaṇas and Aran along with the Kirātas and Kunindas who lived in the Tarai region ruled over by king Subahu for several years. They seem to have occupied some region along the eastern bank of the Upper Ganga. They might have also occupied the Kashgar area in Central Asia<sup>9</sup>.

The people known as the Parataṅgaṇas<sup>10</sup> are also mentioned in the *Mahābhārata*. For their locale Arrian's *Anabasis*<sup>11</sup> is an important source. Paraītakēnai of *Anabasis* may be the same as the Parataṅgaṇa of the *Mahābhārata*. On this basis, McCrindle located their country in a part of the mountainous country lying between the upper course of the Oxus and the Jaxartes<sup>12</sup>. It is interesting to see that a tribe

1. *Sabhāparva*, 47, 19.
2. Moti Chandra, *op. cit.*, p. 68.
3. *Sabhāparva*, 47, 22.
4. *Ibid.*
5. Wood, *A Journey to the Source of the Oxus*, 1872 in the *Introductory Essay by Yule—Geography and History of the Upper Waters of the Oxus*, p. LVII.
6. *Sabhāparva* 48, 2.
7. *Kiṣkindhākāṇḍa*, 43, 37-39.
8. *Sabhāparva*, 48, 3; *Mahābhārata*, 141, 24-25.
9. Moti Chandra, *op. cit.*, p. 79.
10. *Sabhāparva*, 48, 3.
11. Arrian, *Anabasis*, IV, 22
12. Mc Crindle, *The Invasion of India by Alexander the Great*, p. 57.

of the same name occupied a part of Media<sup>1</sup> and Helmand valley which was also called Paraitakene<sup>2</sup>.

Kāyavyas<sup>3</sup>, mentioned in *Sabhāparva*, are likely to be the ancient inhabitants of the Panjshir and Ghorband Valleys. The modern name Khawak Bora Pass in this region is, in all probability, a derivative of the ancient Kāyavyas. Vaiyamakay, another important people mentioned in the Epic can easily be identified with the Aimaka of central Afghanistan, who, in all likelihood, are the descendants of the ancient conquerors of Parapamisus and who still speak Persian<sup>4</sup>.

Vāhlīkas, repeatedly mentioned in this Epic<sup>5</sup>, were divided into two tribes, one located in the plains of the Punjab—between the Chenab and Satluj, and the other located on the lower slopes of the Himalayas, between the Chenab and Beas. The country of Vāhlīka can be identified with modern Balkh in northern Afghanistan<sup>6</sup>. Ancient Vāhlīka was governed by the Greeks. Balkh was a great centre of Zorastrianism. There is a reference<sup>7</sup> to a Vahlika king, known as Salya. He is likely to have been connected with the Bactrians of northern Afghanistan, who were of Iranian origin<sup>8</sup>. The people of Simhala<sup>9</sup>, commonly identified with the Ceylonese, also attended the *Rājasūya* sacrifice and presented several gifts to the Pandava king.

### Śakadvīpa

*Mahābhārata*<sup>10</sup> refers to Śakadvīpa, and its people grouped in four classes known as Maga, Masaka, Manasa and Mandaga. The identification of the Śakadvīpa has been a matter of some serious speculation. Gereni<sup>11</sup> has identified the Śakadvīpa with Siam, Kamboja and Lower Cochin-China. According to Vidyabhusana<sup>12</sup>, Śakadvīpa can be identified with Sogdiana. Roychoudhary<sup>13</sup> identifies it with Siestan, while Rapson<sup>14</sup> is of the opinion that this name has been given to the

1. *Herodotus*, I, 10.

2. Trans, *The Greeks in Bactria and India*, p. 95.

3. *Sabhāparva*, 48, 12.

4. Moti Chandra, *op. cit.*, p. 86.

5. *Sabhāparva*, 48, 12.

6. Moti Chandra, *op. cit.*, p. 91.

7. *Mahābhārata*, I, 61, 6.

8. Moti Chandra, *op. cit.*, p. 95.

9. *Sabhāparva*, 48, 30, 31.

10. *Mahābhārata*, VI, 12, 9, VI, 8, 15; 12.33.

11. Gereni, *Researches on Ptolemy's Geography of Eastern Asia*, pp. 164-165.

12. Vidyabhushan, "Vratya and Samkara theories of Caste", *JASB*, 1902, part I, p. 154.

13. Roy Choudhary, *Studies in Indian Antiquities*, p. 68.

14. Rapson quoted by Buddha Prakash, *op. cit.*, p. 216.

lower Indus Valley after the settlement of this region by the Sakas. In the words of Buddha Prakash<sup>1</sup>, "It extended from the Syr Darya region to that of the Volga and the Don. Thus, it included the land on the eastern, western and northern shores of the Caspian sea". Obviously, it is difficult to ascertain the exact location of Śakadvīpa. Among the rivers of Śakadvīpa, the Sita<sup>2</sup> is generally identified with the river Jaxartes<sup>3</sup>. On this count Śakadvīpa may be located in modern Tadzhikistan Republic of USSR. The fact of the matter is that the Śakas were occupying different parts of Central Asia and Western Asia at different times and since we are not absolutely sure about the chronology of the *Mahābhārata* we can also not be sure about the exact location of Śakadvīpa during the *Mahābhārata* period. On the whole, however, it has to be located on the western borders of India including Russian Central Asia.

### Some Dvīpas

Kṣirodsāgara<sup>4</sup>, Śvetadvīpa<sup>5</sup> and Krauñchadvīpa<sup>6</sup> are also referred to in the *Rāmāyaṇa*. Their detailed study has been made in the section devoted to the *Rāmāyaṇa*. The Narayanasakhā of the *Mahābhārata*<sup>7</sup>, however, may be the same as the Devasakhā of the *Rāmāyaṇa*<sup>8</sup>. It has also been discussed in the section on the *Rāmāyaṇa*.

It is very difficult to conclude a chapter on the epics in the context of India's contact with other countries in the framework of historical discipline, as long as the stratification of the epics remain unidentified, and as long as the epics remain in the fierce controversy of 'Myth or Reality'. Although it appears that in them we are dealing with the situation existing in the period bracketed between 400 B.C. and 400 A.D., still there are scholars who argue that since the date of compilation should not be confused with the date of the actual events, the situation refers to the period bracketed broadly between 1500 B.C. and 1000 B.C. or even earlier by a thousand or more years<sup>9</sup>. Serious scholars of these epics have, however, always accepted the facts of interpolation, not one but several. There is, therefore, hardly any doubt that even if the significant events narrated in the epics are historical realities,

1. Buddha Prakash, *op. cit.*, p. 215.

2. *Mahābhārata*, VI, 12, 30.

3. Dey, *The Geographical Dictionary of Ancient and Medieval India*, p. 172.

4. *Mahābhārata*, VI, 8, 15; *Kiśkindhākānda*, 40,43.

5. Śāntiparva, 322, 25, 337.14; *Kiśkindhākānda* 40,44.

6. *Mahābhārata* VI, 12, 7; *Kiśkindhākānda*, 43, 25-27.

7. *Mahābhārata*, VI, 12, 4.

8. *Kiśkindhākānda*, 43, 15,16-18.

9. Sankalia, *op. cit.*; Lal, "Excavations at Hastinapur. . .", *AI*, Nos. 10-11.

the details were filled in often and on in the period ranging between 400 B.C. and 400 A.D., more particularly between 100 B.C. and 400 A.D., the period in which India's contacts with foreign countries in a regular manner became an established fact, as proved by several independent sources, literary as well as archaeological. At the present state of our knowledge, it is not possible to be more precise than this.

## CHAPTER VIII

### THE PERIOD OF THE EARLY HISTORICAL CULTURE

The period between the Rigvedic Age and the rise of the Mauryan Empire has often been labelled as the “Dark Age” of Indian history, mainly because of the lack of sufficiently large amount of material for reconstructing its course as well as details. The meager archaeological evidence available in foreign sources, especially West Asian, points to the limited amount of commercial and cultural intercourse between India and her western neighbours<sup>1</sup>. It is from the sixth century B.C. onwards, that we reach on firmer grounds as far as socio-politico-economic history of India, both in the internal and external contexts, is concerned. The *Jātakas* though written as religious stories of Buddha's previous births and also other Buddhist literary works provide, mostly indirectly, several references to India's knowledge of and/or relations with countries as far a field as Egypt and Mesopotamia. Alexander's invasion, a well documented event of world history, besides being a turning point of Indian history, was accompanied and followed by a number of Greek historians, and their writings directly provide us with valuable data for the history of this period.

Buddhist literature<sup>2</sup> refers to several sea-voyages. The *Dīgha-Nikāya*<sup>3</sup> mentions journey to distant lands through sea. At the time of departure, it was customary with merchants to ask for some strong-winged birds and carry them in the ships. When due to some unforeseen causes the merchants failed to reach land, they released those birds. If the birds came back to the ship it meant that there was no shore nearby. But if they did not turn up, it indicated that the land

1. Rao, “Shipping in Ancient India”, *ICWTC*, pp.88-90. Also, Ramachandran, “Ancient Indian Maritime Ventures”, *ICWTC*, pp. 71-82; also, Pande, “Indian Religions and the West”, *ICWTC*, 615-622; also, Amba Prasad, “India's Contacts with Africa from the Earliest times”, *ICWTC*, pp. 601-603; also, Singhal, *India and the World Civilization*.
2. *Saṃyutta Nikāya*, *Anguttara Nikāya*, *Vinaya Pitaka*, *Sutta Pitaka*, and *Theragāthā*, etc.; see, Mookerji, *Indian Shipping*, p. 73.
3. *Dīgha Nikāya*, 1.222; cf. also *Jātaka*, Vol.III, pp. 126-267.

is not far off and there was nothing much to fear. The Jātaka stories also refer to shipwreck<sup>1</sup>, spacious ships<sup>2</sup> and ship-building activities<sup>3</sup>. The commercial activities of the Indian traders through sea-route from Varanasi, Videha and Champa to Suvarṇabhūmi or Suvarṇadvīpa, are attested by Ceylonese Chronicles<sup>4</sup>. All this evidence of sea voyage throws sufficient light on the naval and commercial activities of the Indians of that period.

According to Jātaka literature, the entire earth crest of the world is contained in four *Mahādvīpas*<sup>5</sup> (great continents) namely, Uttarakuru<sup>6</sup>, Pubba Videha, Apara Goyana and Jambūdvīpa, surrounded by two thousand dvīpas or doabs<sup>7</sup>. Uttarakuru was situated in the north of the Himalayas<sup>8</sup>. The *Rāmāyaṇa*<sup>9</sup> places it to the south of “*Uttarah Payasām nidhilī*”—the northern deep or the Arctic Ocean. According to the Greek and Indian historians, it was a semi-mythical region, where there was perpetual happiness and bliss<sup>10</sup>. It has been identified by some scholars with Siberia<sup>11</sup>.

It is difficult to identify *Pubba Videha*. The Brahmanāda Purāṇa<sup>12</sup> refers to Bhādraśva as Pūrvadvīpa which may perhaps be identified with Pubba Videha. According to some authorities, it can be identified with Eastern Turkestan and north China<sup>13</sup>.

Probably, the third one, Apara Goyāna, is the Ketumāla of the Purāṇas<sup>14</sup>. Its identification can be made with western Turkestan<sup>15</sup>. The last one of the list is Jambūdvīpa which also finds mention in several literary works: Brahmanical Buddhist and Jaina<sup>16</sup>. The Jātaka literature is silent about its geographical

1. *Jātaka*, III, 127, 29.

2. *Jātaka*, Nos. 466, 539.

3. *Jātaka*, IV, 159; VI, 546.

4. *Mhv.* VI; *Dīpavaṁsa*, IX, 10.28.

5. *Jātaka II*, p. 313; III, pp. 239, 481; VI, pp. 3, 432; Cf. Sircar, *Cosmography and Geography in Early Indian Literature*, pp. 42-43, Pl. 1.

6. *Jātaka*, VI, 545, pp. 278.

7. *Jātaka*, II, p. 313; III, p. 239.

8. *Sonananda Jātaka*, No. 532; *Ait Bra.* VII. 14.4; *Vedic Index*, I, p. 84, “*Parena Hintavantam*”.

9. *Rāmāyaṇa*, IV, 43, 56.

10. Mc Crindle, *Ancient India as described in classical literature*, pp. 63, 113 & Notes; Mak, p. 59, 18 ff.; *Dialogues of the Buddha* III, pp. 192 ff; Muir, *Original Sanskrit Texts*, 1, p. 492.

11. Jayaswal, “Proclamation of Aśoka as a Buddhist and his Jambudvīpa”, *I. Ant.*, LXII, p. 170, cf. Raychoudhuri, *Studies in Indian Antiquities*, p. 71.

12. *Brahmānda Purāṇa*, 45, 24; 46. 35. quoted by Mehta, *Pre-Buddhist India*, p. 364.

13. Raychoudhuri, *Studies in Indian Antiquities*, pp. 75-76.

14. Mehta, *Pre-Buddhist India*, p. 364.

15. Raychoudhuri, *Studies in Indian Antiquities*, p. 75.

16. Dines Anderson, *Index to Jātaka*, p. 56.

bound aries. Traditional conception of Jambūdvīpa was bigger than India proper as we understand it now. Jayaswal interprets it as the continent of Asia<sup>1</sup>. According to some other scholars, however, it represents India, including the present day Pakistan and Afghanistan<sup>2</sup>.

Whatever be the identification of these four continents, it is obvious that India had definite knowledge of the world round it, and some relationship with at least a few of these continents. An attempt to analyse the extent of India's relations with different countries in these continents during the pre-Mauryan times has been made in this chapter.

### Egypt

The 'royal linen', besides precious stones and cinnamon, which were among the yearly tributes of Punt to the Pharaoh Rameses III (12th Century B.C.), might have been obtained from India where alone they were available in those days<sup>3</sup>.

Next in order of exports were ebony, ivory, and cotton goods, mentioned in the Egyptian inscriptions as being supplied to Egypt in the second millennium B.C. by the Abyssinian and Somali traders<sup>4</sup>. Probably the traders of Abyssinia and Somaliland received ebony from India, where alone this wood was found during the period under review<sup>5</sup>. Axes, adzes and swords of Indian manufacture were used by the elephant hunters of Abyssinia and Somaliland<sup>6</sup>. Indian traders used to sail straight to Abyssinia<sup>7</sup> and with their frequent visits to this region they became quite familiar with the various ports on the Nile<sup>8</sup>. According to Wilkinson, indigo, tamarind, wood and other Indian products have been found in the Egyptian tombs<sup>9</sup>. It has also been pointed out that the Egyptians dyed cloth in Indigo and wrapped their mummies with Indian muslin<sup>10</sup>.

Considering the perfection which the Egyptians attained in the science of embalment at such an early age and the use of Indian muslin for the purpose, one can safely say that the two countries had close economic ties in those days.

1. Jayaswal, "Proclamation of Aśoka as Buddhist and his Jambudvipa", *I.Ant.*, LXII, p. 170.

2. Mehta, *Pre-Buddhist India*, p. 365.

3. *Georgics*, IV, 37.13.

4. Iyengar, "The trade of India", *IHQ*, II, p. 39.

5. Cf. *Georgics* II. According to Periplus, there was exportation of ebony from India to Africa in the first century A.D. to be supplied to other countries. This was probably a continuation of pre-existing trade between India and Africa—*Georgics VII*.

6. Iyengar, *op. cit.*, p. 39.

7. *Ibid.*

8. *Ibid.*

9. Wilkinson, *Ancient Egyptians*, II. 237 *vide* Mookerji, *Indian Shipping*, p. 91.

10. Kennedy, "The Early Commerce of Babylon with India", *JRAS*, 1898, pp. 250-251.

## Judaea

Navigational contacts in Hebrew kingdom of ancient Israel received great impetus at the hands of Solomon (c.974—937 B.C.) who took several steps for the development of maritime activities. To make Jerusalem as magnificent as the capitals of his great neighbours, gold, silver and rare type of woods were needed in sufficient quantities. So he asked his ally Hiram of Tyre to lend him some of his skilled seamen to build a fleet for use in eastern waters. The port of Eziongeber, modern Akaba, at the northern extremity of the right arm of the Red Sea, became their headquarters and then they soon crossed the straits of Bab-el-Mandeb and reached the port of Ophir, their final destination. From Ophir they returned with four hundred and twenty talents of gold, as well as sandal wood, ivory, apes and peacocks. The voyage took three years<sup>1</sup>. In the light of this description the port of Ophir has to be located some where on the western Indian coast<sup>2</sup>. The export of the vast quantities of gold from it suggests its identification with the "Barbaricon" of the Greek traders, which stood at the mouth of the Indus<sup>3</sup>. Another point, indirectly in favour of this identification may be the recovery of significant amount of gold jewellery from the Indus Valley sites in early times, i.e., 3rd and 2nd millennia B.C.

Ivory, apes and peacocks were Indian articles and must have been imported from some Indian port, a fact, clearly attested by philology. The Indian names of these articles were actually borrowed by the Hebrews. For ape the Hebrew word *koph* is identical with the Sanskrit word *kapi*. On the other hand, peacocks seem to have been imported into these ancient lands from some south Indian port, as the Hebrew word *thuki* for peacock seems to have been derived from the Tamil *tokei*<sup>4</sup>. The Hebrew word *shen habbin* for ivory, also appears to be a translation of Sanskrit *ibha danta*, e.g. elephant's teeth<sup>5</sup>.

Besides the above-mentioned terms, many other words also point to India's influence on Hebrews. Hebrew *almug* is probably a variation of the Sanskrit *Valgu*<sup>6</sup>. Hebrew *sadin*, Arabic *satin*<sup>7</sup> and Greek *sindon*; all seem to be derived from *sindhu*,

1. Kings, X 22, IX 26; and II *Chronicles*, IX 21.

2. It has, of course, also been located variously in Arabia, Ceylon, the Malay Peninsula and various parts of India (Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBRAS*, Vol. 23, p. 218).

3. Rawlinson, *op. cit.* p. 218.

4. *Ibid*; Pusalker, *op. cit.*, p. 149; Iyengar, *op. cit.*, p. 40.

5. *Ibid.*

6. Pusalker, *ap. cit.*, p. 149; Iyengar, *op. cit.*, p. 40.

7. Rawlinson, *op. cit.*, p. 149; Pusalker, *op. cit.*, p. 149; Iyengar, *op. cit.*, p. 40.

which, as already noted, stood for Indian cotton cloth.<sup>1</sup> Hebrew *karpas* and Greek *karpas-os* are also derived from sanskrit *karpasa* (cotton)<sup>2</sup>.

As far as the land-route from India to Judaea is concerned, there is little information on it before the time of Darius the Great. The journey over land was difficult and dangerous mainly because wild tribes beset the road. In any case, the route must have lain past the Caspian and north of the Carmanian desert to Balkh, where the roads running to China and India converged<sup>3</sup>.

### Assyria

Representations of Indian elephants, apes and Bactrian camels can be noticed on the obelisk of Shalmanesar III (859 B.C.), an Assyrian King<sup>4</sup>. These animals are likely to have been imported from India by the over-land route<sup>5</sup> passing through Makran. This archaeological evidence supports the export of Indian animals to Assyria, particularly, elephants and apes.

Besides above animals, birds too reached Assyria. There is evidence that a peacock was among the wonderful birds, received as tribute by Tiglath Pilaser III (744—727 B.C.)<sup>6</sup>. During the reign of the same king certain other Indian articles were also exported from India to Assyria. Tribute, paid to this king from the Chaldean State of Bit Yakin, included mostly Indian articles—precious stones, pearls, timber, striped clothing and spices of different kinds. During this period the ports of the Persian Gulf were the thriving centres of commerce<sup>7</sup>.

Indian cotton was also popular in foreign countries. Sennacherib, a king of Assyria, (704—681 B.C.) was responsible for the introduction of the cotton plant in Assyria<sup>8</sup>. He had a fleet built on the Persian Gulf by Phoenician carpenters, and he is reported to have sailed against the Babylonian king Merodach Baladan, who fled to Magitu on the Coast of Elam. Maritime trade with India seems to have been the cause of this conflict. The articles imported from India included cotton, rice and peacocks<sup>9</sup>. The fact that the word 'sindhu' which is taken to mean cotton,

1. Iyengar, *op. cit.*, p. 40; Pusalker, *op. cit.*, p. 149.

2. Pusalker, *op. cit.*, p. 149; Iyengar, *op. cit.*, p. 40.

3. Rawlinson, *op. cit.*, p. 221.

4. *Ibid.*, *Intercourse between India and the Western World*, p. 3; Iyengar, *op. cit.*, p. 42; Pusalker, *op. cit.*, p. 149; Majumdar, *The Age of Imperial Unity*, p. 612.

5. *Ibid.*,

6. Meissner, *Babylonian and Assyrian*, I, pp. 223-253.

7. *Periplus*, pp. 123-160.

8. King, in *Proceeding of the Society of Biblical Archaeology*, 1909, pp. 339-43.

9. Thompson, *A Dictionary of Assyrian Botany*, 1949, pp. 106-107.

is written on tablets found in the library of Asurbanipal<sup>1</sup>, an Assyrian king (668—627 B.C.), goes to confirm the export of cotton from India. It is reported that this king is known to have sent for Indian plants, including the 'wool bearing trees' of India. Such evidence prove the antiquity of cotton trade between India and Assyria.

With commercial intercourse, contacts were established in other spheres. According to some scholars, the Brahmi script can be traced back to the Phoenician alphabets which are said to have reached India through Mesopotamia<sup>2</sup>. This, however, is a controversial issue and nothing can be said with certainty either in favour or against the contention; arguments in favour of indigenous origin of Brahmi are equally significant and valid<sup>3</sup>.

The above-mentioned details indicate that Western Asia had commercial contacts with India and Indian articles had an important place in the market of the West Asian countries although we are not in a position to determine the exact nature and quantum of the trade.

### **Iran**

From time immemorial India and Iran, the two neighbouring countries, have been politically and culturally very close to each other, as already shown in the earlier chapters. There are sufficient foreign records and inscription to prove that the north-western region of India was once a part of the Achaemenian Empire and that Persian sciences, medicines and philosophy owe a great deal to Indian achievements in these fields. In the fifth century B.C. India had to face the military prowess of Cyrus, the King of Persia, who extended the Achaemenian Empire upto India. He might have attempted to subdue India since we are told by Nearchos (as reported by Arrian) that the desert of Gedrosia (part of Baluchistan) came in his way where his whole army perished<sup>4</sup>. Later on, according to Pliny<sup>5</sup>, he destroyed the famous city of Kapisa. Herodotus<sup>6</sup> further mentions that the same king was responsible for the conquest of Gandhara. Xenophon<sup>7</sup> says that he brought both, the Bactrians and the Indians under his rule. According to Arrian<sup>8</sup>, people to the

1. Rawlinson, *Intercourse between India and its Western World*, pp. 2-3; Pusalker, *op. cit.*, p. 149.
2. Zimmer, *The Art of Indian Asia*, p. 49; Billimoria, "The Iranians in Ancient India especially in Sind and the Punjab", *J. Sind. Hist. Soc.*, Vol. II, Part I, p. 41; Turner, *The Great Cultural Tradition*, p. 39.
3. Sircar, *Indian Epigraphy*, pp. 31 ff.
4. Xenophon *Anabasis*, VI 24, 2-3. Elsewhere Arrian (*Indica* IX 10).
5. Sastri, *Age of the Nandas and Mauryas*, p. 30.
6. Herodotus I, 153, 177.
7. Xenophon, *Cyropaedia* -I. 1-4.
8. Mc Crindle, *Ancient India as described by Megasthenes and Arrian*, p. 179.

Greeks<sup>1</sup>. The infantry soldiers were clad in cotton garments and had cane bows and iron-tipped arrows<sup>2</sup>. The reign of Artaxerxes Mnemon was also quite important. According to his court physician Ktesias, he received a tiger from India<sup>3</sup>; and the same authority further mentions the superiority of the two swords of Indian iron which were presented to that king<sup>4</sup>.

The last king of the Achaemenian Empire, Darius III, also maintained contacts with India—as is evident from the account of Arrian who reports that the Persian army included Indian troops and elephants when it faced Alexander's army in the battle of Arbela in 333 B.C.<sup>5</sup>.

All these details prove that north-western part of India was under the rule of the Persian kings for a considerable period. During the period of Persian domination of Egypt (525—405 B.C.), an Indian colony had grown in Memphis<sup>6</sup>. The contacts of the Indian and Persian brought fruitful results in the cultural fields. The two cultures freely borrowed from each other not only technological, but also scientific and philosophical knowledge in several inventions such as writing and stone sculpture. In course of time, as a result of the fusion of the two kinds of knowledge a new cultural pattern was evolved. To quote an example, the Persians seem to have been responsible for the origin and development of Kharoshthī script which was derived from the Aramaic script of Persia in about the 5th century B.C. The script was seen in use in the north-west Frontier from *circa* 3rd century B.C. to the 4th century A.D<sup>7</sup>. The discovery of an Aramaic inscription at Taxila, dated to 3rd century B.C., testifies to the use of Aramaic script in India<sup>8</sup> in the Mauryan period; obviously, its introduction into India should be dated to a period earlier than the third century B.C.

The Iranian influence was felt in the economic field as well. Persian coins (Pl. XXIa) were in circulation in the region of Sind and Punjab<sup>9</sup>. The 'Darics' (Persian gold coins) are rare in India, but 'Siglois' or 'Shekels', silver coins, have been discovered in a large number<sup>10</sup>. Some of the 'Siglois' discovered bear peculiar counter-marks on both the sides<sup>11</sup>. According to some numismatists

1. *Herodotus*, VII. 65; VIII, 113; IX, 31.

2. *Ibid.*

3. Cf. *Pausanias* IX, 218. *Aristotle*; *Hist.-Anim*, II. 1.

4. Mc Crindle, *Ancient India as described by Ktesias the Knidian*, p. 9.

5. Arrian, *Anabasis* III. 8. 3-6. 6. Petrie, *Memphis* I, 17—17.

7. Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 225; *Intercourse between India and the Western World*, p. 28.

8. Marshall, *Taxila*, Vol. 1, p. 164.

9. Unvala, "Political & Cultural Relations Between India and Iran", *ABORI*, Vol. 28, 1947, p. 175; Chakrabortty, "The Persian and Greek Coins and their imitations in Ancient India", *IHQ*, Vol. 10, pp. 70-71.

10. *Ibid.*

11. Chakrabortty, *op. cit.*, pp. 70-71; Rapson, "Counter-Marks on Early Persian and Indian coins", *JRAS*, 1895, p. 865.

and historians<sup>1</sup> they resemble the counter-marks of indigenous Punch-marked coinage. Some marks of these coins are even similar to Brāhmī and Kharoshthī letters<sup>2</sup>. Scholars like Rapson think that both the types of these coins were made in India and were current side by side<sup>3</sup>.

Two types of 'daric' coins are noticeable. Type I, datable to c. 5th or 4th century B.C., bears on the obverse the figure of king holding a spear and a stringed bow, and wearing kidaris and kandhys; and an irregular oblong incuse on reverse. It has some resemblance with the gold coins of Darius I<sup>4</sup>.

Type II, assigned to a later date, seems to be a copy of Darius III's coin. It is a double daric. On the obverse, there is the depiction of the Achaemenid king as an archer, half kneeling to the right. There are Greek letters and a symbol in front and an inscription behind and beneath the figure of the king<sup>5</sup>. On the reverse, occur "wavy bands", irregular incuse, with conventional pattern formed by a curved line in relief<sup>6</sup>. Type II consists of a Greek monogram or Greek letters<sup>7</sup>. It seems that they were issued after the defeat of the Achaemenids by Alexander.

Whether these coins came to India in commercial intercourse or were struck here for purposes of trade, is not clear. Foreign invasions were, to some extent, responsible for the expansion and development of trade and commerce in this period. The records of Curtius, Diodorus, and Arrian refer to the articles that Alexander presented as gifts to the King of Taxila. Along with several articles of gold and silver, many Babylonian and Persian pieces of embroidery find mention in the list of the gifts<sup>8</sup>. Nearchos, an admiral of Alexander's navy, described a secured port with the name of Alexander's haven, where he stayed for twentyfour days at the time of this Greek invasion<sup>9</sup>. This shows that the harbour existed before the arrival of the Greeks and the Iranians must have elaborated it for trade and other purposes.

According to Arrian<sup>10</sup>, at the time of Nearchos's departure for home by sea, he got a guide in Gedrosia who had the knowledge of the coast as far as the Gulf of

1. Chakrabortty, *op. cit.*, pp. 70-71, Rapson, "Counter-marks on early Persian & Indian Coins". *JRAS*, 1895, p. 865.

2. *Ibid.*

3. Rapson, *Cambridge History of India*, Vol. 1, pp. 307-308; The weight of Darics is about 130 grains and the maximum weight of the Siglois is 86.45 grains. Twenty Siglois were equal to the value of a Daric.

4. Chakrabortty, *op. cit.*, pp. 70-71.

5. *Ibid.*

6. *Ibid.*

7. *Ibid.*

8. Smith, *The Early History of India*, 4 ed., p. 66.

9. *Ibid.*, p. 110; Chattopadhyaya, "Foreign Notices of Achaemenid India", *IHQ.*, Vol. 26, 1950, p. 102.

10. Arrian, *Indica*, 22.I; 27-1.

Ormyz. It can be inferred from this that at that time Indian vessels were sailing along the coast of Gedrosia to Arabia and the Persian Gulf. Maritime trade witnessed a marked development after the Persian conquest. It is interesting to note that a Hindu woman, called Busasa, had a lodge under police supervision at Kish for travellers and merchants<sup>1</sup>.

Silk and ivory were exported from India to the Persian empire in exchange of gold<sup>2</sup>. Some inscriptions on clay tablets and on stone slabs recovered from the palace of Darius I in Susa confirm the export of ivory from India<sup>3</sup>. The credit of introducing iron working in the Indian region of the Achaemenian empire has been given by some scholars<sup>4</sup> to the Persians although recent archaeological discoveries do not support this contention<sup>5</sup>. All these facts point to close political and commercial contacts between India and Iran of the 5th and 4th centuries B.C.

### Babylonia

Evidence of definite commercial contacts and communication between India and Babylon goes back at least to the Harappan period<sup>6</sup>. But very little information of this nature is available in the post-Harappan period. The limited evidence, however, reveals that there must have been some commercial contacts between these two countries. It is significant to note in this context that Scylax's exploration of the Indus and discovery of a new route proved very useful in furthering the trade and cultural contacts between India and Babylonia<sup>7</sup>.

In 606 B.C., Nebuchadnezzar conquered Assyria, and Babylon became one of the most prominent cities of Western Asia. Merchants from different countries, especially from Egypt, Palestine, Phoenicia and India, assembled here and used the

1. Olmstead, *History of the Persian Empire*, p. 145.

2. Mookerji, *Indian Shipping*, p. 82.

3. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. 28, 1947, p. 175. They give us a knowledge of subject races of the empire and the contributions of men and materials, provided by them for construction of palace. The text of the inscription runs like this— "mosaic elements were executed with precious stones, like lapis lazuli and serpentine of Sogdiana and the haematite of Chorasmia and with ivory of Ethiopia and India and Arachesia". Girshman, *Iran*, p. 163; Dwivedi, "Export of Indian Ivory Carvings to European and Asian Countries," *Studies in the Foreign Relations of India (from earliest times to 1947)*, 1975, pp. 456.

4. Wheeler, *Early India and Pakistan*, p. 132; *Civilization of Indus Valley and Beyond*, p. 113.

5. Iron has been reported from some of the graves of the Swat Valley dated to 900 B.C., and also from the neolithic-megalithic deposits of Hallur, Distt. Dharwar, Karnataka dated to 1000—900 B.C.

6. See Chapter 3.

7. Chattpadhyaya, "Foreign Notices of Achaemenid India", *IHQ*, Vol. 26, p. 101.

markets of the city as their meeting place<sup>1</sup>. Indian merchants had a colony there which continued to exist in later period also<sup>2</sup>. The presence of Indian merchants at this place is proved by the reference to them in the tablets bearing the business records of the great firm of Murashu and Sons at Nippur<sup>3</sup>. It appears that probably in their turn, the Babylonian merchants also built an establishment in India at the frontier town of Taxila<sup>4</sup>. According to Strabo, the followers of Alexander saw a marriage market at Taxila, arranged in well-known Babylonian style<sup>5</sup>.

Buddhist literature also seems to provide information on Babylonian contacts with India. The well-known *Baueru Jātaka*<sup>6</sup> indicates regular commerce and continuous navigation between these two countries through the Persian Gulf. According to the story told in it<sup>7</sup>, some Indian merchants went to Babylon<sup>8</sup> through sea for the sale of crows and peacocks. It appears that in this period Indians were the first rate expert mariners. It has been pertinently suggested that the age of this intercourse might be earlier than the date of the *Jātakas* as the folk tales on which these stories are based, were of a much early date<sup>9</sup>. According to a scholar, peacock became a symbol of commercial and cultural contacts between the two<sup>10</sup> countries. Probably, the export of this bird began after the exploration of the Indus by Scylax<sup>11</sup>.

Precious stones, dogs<sup>12</sup> (Indian hound) and wood were the main articles of export to Babylon. The records of Herodotus<sup>13</sup> also confirm the export of Indian

1. Rawlinson, *Intercourse between India and the Western World*, p. 7; "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, 1914, p. 221.
2. Iyengar, "The trade of India", *IHQ*, Vol. 2, p. 42.
3. Kennedy, "The Gospels of the Infancy, the Lalitavistara and the Vishnu Purana: or the transmission of Religious Legends between India and the West", *JRAS*, 1917, p. 237.
4. Rawlinson, *Intercourse between India and the Western World*, p. 7.
5. Strabo, IV, I, 62.
6. *Jātaka* III, No. 339.
7. *Ibid.*
8. Though the identification of Baueru with Babylon is not quite definite yet majority of historians subscribe to this identification. (Mookerji, *Indian Shipping*, p. 74; Buddha Prakash, "Vyāsa (a Study in Indo-Babylonian Cultural Contacts)", *JBORS*, Vol. 37, p. 34-35; Rawlinson, *India*, p. 55; Mehta, *Pre-Buddhist India*; Rawlinson, *Intercourse between India and the Western World*, p. 4; Moti Chandra, *Sarthavaha*, p. 59). But according to Deshpande, *Baueru* may perhaps be identical with Bahrain island in Persian Gulf; Deshpande, "Presidential Address of Section 1", *PIHC*, 24th Session, Poona, 1963, p. 33.
9. Kennedy, "The Early Commerce of Babylon with India", *JRAS*, 1898, p. 268.
10. Buddha Prakash, "Vyāsa (a study in Indo- Babylonian Cultural Contact)", *JBORS*, Vol. 37, 1951, p. 35.
11. *Ibid.*
12. Herodotus, I, 192.
13. *Ibid.*

animals; a Persian governor of Babylon had a large number of big Indian hounds. The discovery of Indian cedar in the palace of Nebuchadnezzar at Birs Nirmud<sup>1</sup> and of two rough logs of Indian teak in the second storey of the temple of the moon at Mugheir<sup>2</sup> (Ur of the Chaldees) rebuilt by Nebuchadnezzar and Nabonidus, bear ample testimony to this fact.

With the commercial intercourse also came cultural influence from one to the other country. The story of the *Mahoshadha Jātaka*<sup>3</sup> is similar to the story of the judgement of Solomon, a king of Judaea<sup>4</sup>. According to Rawlinson, probably it came to India along with Babylonians at the time of the Captivity<sup>5</sup> (597-538 B.C.).

It has been suggested that in the field of astronomy the idea of designating the days of the week after the name of sun, moon and five planets originally belonged to Babylon and possibly from there it came to India<sup>6</sup>. It has been pointed out that relic-worship and stupa architecture are not of Indian origin and may have been derived from the Babylonian tradition of Urn burials<sup>7</sup>. Urn burials were, however, in vogue in India in the Harappan and post-Harappan cultures (See chapters 3 and 4).

It is, thus, apparent that the contacts between India and Babylonia, established probably during the Harappan period, continued to flourish during the period under review although there are many missing links.

### Śrī Laṅkā (Ceylon)

From remote past India and Śrī Laṅkā (Ceylon) were close to each other, not only geographically but also culturally. The excavations at the Teri sites yielding geometric microliths of 5000-4000 B.C. (?) of Tirunelvelli reveal a link between prehistoric Śrī Laṅkā and India<sup>8</sup>. The story of the war between Rāma and Rāvaṇa and the former's conquest of Laṅkā is mentioned in the *Rāmāyaṇa* and other texts. Laṅkā

1. Kennedy, "The Early Commerce of Babylon with India", *JRAS*, 1898, p. 266.
2. *Ibid.*, p. 267; Pusalker *op. cit.*, p. 149; Rawlinson, *Intercourse between India and the Western World*, p. 3.
3. Rhys Davids, *Buddhist Birth Stories*, Vol. 1, p. 14. The Jātaka narrates the story as to how Buddha found out the real mother when two women came to him each claiming a boy to be her son by putting the boy to torture. The real mother immediately withdrew and thus disclosed her identity.
4. Rawlinson, *Intercourse between India and the Western World*, p. 11. The Hebrew story in which a similar judgement is ascribed to Solomon, occurs in the book of Kings which is older than the time of Buddha.
5. *Ibid.*
6. Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, 1914 p. 221.
7. *Ibid.*, p. 222.
8. Srivastava, "Hinduism in Ceylon", *ICWTC*, p. 413.

is generally identified with Ceylon, and there are certain places in Ceylon which seem to show some connection with Rāmāyaṇa story<sup>1</sup>. The date of Rāma's conquest of Śrī Laṅkā, if it is taken as a fully historical event, cannot be determined with certainty<sup>2</sup>.

The chronological history of the Indo-Śrī Laṅkā relations starts from the colonization of Śrī Laṅkā in the sixth century B.C. by the people of Indian origin. Literature, Indian as well as Ceylonese, helps us in establishing the contacts. The island of Śrī Laṅkā is mentioned in *Valāhassa Jātaka*<sup>3</sup> as the Tambapāṇṇi division which extended along the coast on the West bound by river Kalyāṇī in the south and Nāga-Dvīpa in the north. Different accounts of this colonization are to be found in the literature of both the countries. But in spite of the differences, the main theme is the same. It is generally believed that the earlier inhabitants of Śrī Laṅkā, as of any other country were primitive tribes, called variously as Nāgas, Yakshas, Rākshasas, and the country was colonized by either a group of merchants or a prince from India. However, there seems no doubt that some of the basic elements of civilization, such as the script, organized religion and literature were introduced in this country by early Indian settlers.

The Ceylonese chronicles<sup>4</sup> as well as the Indian writings<sup>5</sup>, and the accounts of foreign travellers<sup>6</sup>, tell us a lot about the colonization of Śrī Laṅkā by the Indians. The *Mahāvāimśa*<sup>7</sup> tells that Vijaya<sup>8</sup>, a prince of Bengal, with his hundred followers, was expelled by King Siṁhavāhu of Bengal as a punishment for the oppression of his subjects. The ship carrying them, started from a near Siṁhapura and reached Śrī Laṅkā through the port of Suppara<sup>9</sup>. It is said that he landed in Śrī Laṅkā on

1. Cf. also Raghavan, *India in Ceylonese History, Society and Culture*, pp. 1-8. Sankalia of course, does fully agree with these views.
2. Sankalia, *Rāmāyaṇa, Myth or Reality*.
3. *Jātaka*, II, No. 196.
4. *Mahāvāimśa* and *Dīpavāimśa*.
5. *Divyāvadāna*. According to this text, a son of an Indian merchant left for Ceylon with a group of merchants for commercial purpose. He invaded Ceylon and ruled over the natives.
6. Giles, *The Travels of Fa-hien*, p. 66. According to Fa-hien, this country was originally inhabited by devils and dragons. The merchants of neighbouring countries colonized them. India is the nearest country for Ceylon, and hence it can be inferred that the merchants of different regions of India were meant by the Chinese travellers; Hiuen-Tsang also gives the credit of colonization to Indian merchants *Si-Yu-Ki* II, 241.
7. *Mhv*, VI, 44.
8. Geiger, "A short history of Ceylon from the Fifth Century B.C. to 4th century", *IHQ*, Vol. 2, p. 5. The name of the leader of the immigrants Vijaya is certainly historical, but the details are mixed with legendary darkness.
9. *Mhv*, VI, 46.

the day the Buddha attained Mahā-Parinirvāṇa<sup>1</sup> and found that the country was inhabited by the 'yakshas' and was ruled by a princess Kuveni. In the beginning he met with some resistance<sup>2</sup>, but after sometime the conquest of Śrī Laṅkā was complete. He founded several cities, Tambapaṇṇi<sup>3</sup>, Anuradhapura, Upatissa-gama, Vijitpur, Uruvela<sup>4</sup>, etc., which can be identified even today.

Historians believe that the chronological history of Śrī Laṅkā starts with the landing of Vijaya on the soil of that country. The day of his landing and the day of Buddha's death are said to be the same. But two different traditions record two different dates—543 B.C. and 483 B.C. The latter one, however, is more acceptable<sup>5</sup>.

The second wave of Indians also came to this country in the time of Vijaya himself. Both he and his ministers were desirous of having an Indian princess as a queen<sup>6</sup>. He sent envoys to the Pandyan king of Madura with costly gifts, and asked for the hand of his daughter<sup>7</sup>. The Pandyan king of Madura accepted the proposal happily and sent his daughter with hundred other maidens, many craftsmen and a thousand families of the eighteen guildes<sup>8</sup>. They landed at Mahatirtha<sup>9</sup> and received

1. *Mhv*, VI, 47.
2. *Mhv*, VII, 15-38. The inhabitants of Ceylon were very cruel and they did not like the arrival of Vijaya and his followers in that island. So they made all of them prisoners except Vijaya. But their Queen Kuveni fell in love with this Indian prince and through her he could conquer them all.
3. *Mhv*, VII, 37-41. ff. When they reached Tāmraparṇi, they put their hands first on the earth. Because of touching the yellow colour, their hands became just like the colour of copper hence the island was designated as Tāmraparṇi.
4. *Mhv*, VII, 45.
5. Aśoka came to the throne in 272 or 268 B.C. The *Mahāvāriṣa* records that he was the contemporary of the Ceylonese kings, Mutśiva and Devānāmpiya-Tissa. It has been stated there (*Mhv*, V) that the third Buddhist council was held in the time of Aśoka and it was decided that Mahendra should be sent to Ceylon for the spread of Buddhism (*Mhv*, XII 7-8). But because of Mutśiva, he postponed for some time his idea of going there. The same text (*Mhv*, XI) deals with other events alike Aśoka's sending the gifts to Devānāmpiya-Tissa at the time of his coronation. It shows that the Ceylonese king came on the throne during his reign. If 543 B.C. be the date of the Buddha's death, the same would be for the landing of Vijaya on this island. This source categorically informs that these five rulers from Vijaya to Mutśiva ruled over a period of 236 years. If we take out these 236 years from 543 B.C., the date would fall in 307 B.C., the year in which the king Mutśiva retired and Tissa got himself coronated. But, 307 B.C. is far from Aśoka's reign. On the other hand 483 B.C. fits in, well as it would give us 247 B.C. as the date of Mutśiva's retirement and Tissa's coronation, and is hence acceptable.
6. *Mhv*, VII, 47.
7. *Mhv*, VII, 50.
8. *Mhv*, VII, 57.
9. *Mhv*, VII, 58.

a warm welcome from the king<sup>1</sup>. It was then that the people of Śrī Laṅkā coronated Vijaya as their king and the Pandyan princess as the queen<sup>2</sup>.

Another wave of migration came after the death of king Vijaya. In his lifetime he had sent an envoy to his brother Sumitra in Bengal with a request to rule thereafter his death as he had no issue from his queen<sup>3</sup>. His brother sent his son, 'Panduvāsudeva' with his thirty-two ministers to rule there<sup>4</sup>. His wife 'Bhadra-kat-yāyñi<sup>5</sup>, also came over to Śrī Laṅkā with her brothers<sup>6</sup>.

The Jātakas also testify to Indian trade with Śrī Laṅkā and Suvarṇabhūmi<sup>7</sup>. The *Valahassa Jātaka* refers to the trade going on between Vārāṇasī and Tāmraparṇī dvīpa<sup>8</sup>. In another Buddhist text<sup>9</sup> can be seen a list of costly stones, such as saphire, jasper, ruby, diamond, which were imported to India from Śrī Laṅkā and other countries.

This regular intercourse brought the Indian influence in other cultural spheres also. All the important religions of India were introduced in Ceylon at that time as evidenced from the *Mahāvāṃsa*. The reign of king Pañḍukābhaya is most important from this point of view. The *Mahāvāṃsa* records the traces of the Śaivas, Brāhmaṇas, Jainas, Paribbājakas, Ājīvikas, Pāsandas, etc. According to this text<sup>10</sup>, this king constructed a Śivikā-sālā<sup>11</sup>. The Tika gives two different views on the Śivikā-sālā<sup>12</sup>. According to one, it was a hall where the Śivalinga was established and worshipped, while according to another, it was a lying-in-home. The first interpretation, mentioned in the company of other religious buildings<sup>13</sup>, is acceptable to several scholars. If that is so, it would indicate that phallic worship was prevalent in ancient Ceylon.

The earliest inscriptions indicate that the Brāhmaṇas came into Ceylon only after the introduction of Buddhism<sup>14</sup>. But they might have been there even earlier. According to *Mahāvāṃsa*<sup>15</sup>, Pañḍukābhaya built a dwelling place and another building

1. *Mhv.*, VII, 69-70.

2. *Mhv.*, VII, 71-72.

3. *Mhv.*, VIII, 1,2,3.

4. *Mhv.*, VIII, 10-11, 16-17.

5. *Mhv.*, VII, 17-28.

6. *Mhv.*, IX, 6.

7. *Mahā Janak Jātaka*, *Satiṅha Jātaka*, *Susondi Jātaka*.

8. *Jātaka*, II, No. 196. *Valahassa*, p. 293.

9. *Chulavagga*, 9/1/3.

10. *Mhv.*, X, 102.

11. *Mt.*, p. 296.

12. Paranavitana, *JRAS* (CB), Vol. XXXI, No. 82, p. 326; Rahula, *History of Buddhism in Ceylon*, p. 45.

13. Paranavitana, *JRAS* (CB), Vol. XXXI, No. 82, p. 332.

14. *Mhv.*, X, 102.

called *Sotthisālā* for the Brāhmaṇas. The Tika<sup>1</sup> refers to the latter as a hall where the Brāhmaṇas utter 'svastivachana'. In the Mauryan period Brahmanism was also prevalent as is borne out by ancient texts<sup>2</sup>. The Nigaṇṭhas (Jain in Pali literature) were also residing there, as a house was built for the Nigaṇṭha Jotiya and Giri, and a *devakula* (chapel) for the Nigaṇṭha Kumbhanda<sup>3</sup>. Pañḍukābhaya was responsible for the construction of both the buildings. Paribbājakas, Ājīvikās, Pāsaṇḍas, Pabbājitas and Samaṇas were residing in this island in the ancient past. The same text<sup>4</sup> informs that this king built a monastery for the Paribbājakas and a house for the Ājīvikas. Other ascetics also lived with the Nigaṇṭhas<sup>5</sup>. The presence of Paribbājakas and Pabbājitas is shown by other evidence also, as the god Uppalavaṇṇa is said to have come to Ceylon in the guise of Paribbājaka to help Vijaya<sup>6</sup>, and Panduvāsudeva<sup>7</sup> is also said to have come there in the guise of *Paribbājaka*.

Ancestor worship and the adoration of the spirits of the dead was common to both India and Ceylon. There was the belief that the faithful and devoted persons after their death again come into this world as Yakas and take care of their favourites and thus Cittā and Kālavela were reborn as Yaksini and Yaksā<sup>8</sup>. Such beliefs seem to have been quite popular in India also, both before and after the Buddha<sup>9</sup>.

Generally the credit of introducing Buddhism into Ceylon goes to Aśoka's son Mahendra in the middle of 3rd century B.C. But it seems surprising that information about the Buddha and his teachings had not reached the Island earlier, though there was a constant intercourse between the two countries. Fa-hien<sup>10</sup> says that Buddha himself visited this country. But this does not seem reliable as there is no indication of this event in the Ceylonese chronicles.

After going through the above mentioned details there remains no doubt that Indians were responsible for the colonization of Ceylon and spread of Indian culture there at a very early date. Even the present Ceylonese culture shows a considerable Indian impact testifying to the deep-rooted contacts between the two countries.

1. *MT.*, p. 296.

2. *Mbv.*, p. 85.

3. *Mhv.*, X, 97-99.

4. *Mhv.*, 101-102

5. *Mhv.* X, 98.

6. *Mhv.*, VII, 6.

7. *Mhv.*, VIII, 11.

8. *Mhv.*, X, 85.

9. *Jātakas*, 512, 544, 545.

10. Giles, *The Travels of Fa-hsien*, p. 67

## Greece

The voyage of Scylax, a Greek sea captain of Caryanda, whom Persian king Darius I sent out in the latter part of the sixth century B.C. to explore the Indus, helped in bringing the Indians and the Greeks together in that period<sup>1</sup>. It is said that he had found his way from the city of Kaspapyrus in the Paktyikan district, sailed down the stream to the sea, and after a voyage of thirty months, reached the lower Kabul valley. His journey might have taken him through a part of Kashmir and the bulk of the Indus country<sup>2</sup>. It appears, thus, that the Greeks and the Indians had contacts with each other even before the invasion of Alexander. The fact that Alexander found several settlements of the Greeks in the Trans-Indus and Afghanistan areas during the course of his invasion<sup>3</sup> is a further evidence of such contacts. The people of Nysa, reported of themselves to the Greek king, as Greeks<sup>4</sup>. The Persian king Xerxes also founded an Ionian Greek colony between the boundaries of Balkh and Samarkand<sup>5</sup>.

The next important stage of political contacts began with the invasion of Alexander in 327 B.C. (Fig. 77). After conquering the Achaemenian empire he made his military incursions into north-western India which was ruled by a large number of independent kings and tribal republics at that time. He entered the Punjab and marched up to Beas from where he was compelled to turn back. In 326 B.C. he conquered the eastern satrapy of the Achaemenian empire including the small tribes. He finally left India in 325 B.C.<sup>6</sup>

But before he left, he established several Greek settlements in India at Pushkalāvati, Aronos, etc. Three Satrapies under a Macedonian satrap, were formed in the areas west of the Jhelum. Three vessel states, headed by Indian kings, namely Puru or Porus<sup>7</sup>, Āmbhī, and the king of Abhisāra<sup>8</sup>, also owed allegiance to Alexander.

Eight Indian names are mentioned in the work of the Greek writer Hekataeus of Miletus, a contemporary of Scylex<sup>9</sup>, the Indus-the Indi, the city of Kaspapyrus, the country of the Gandarii, the opiae and the Kalliatae<sup>10</sup>,

1. Herodotus, IV, 44.

2. Sastri, *Age of the Nandas and Mauryas*, p. 83.

3. Rawlinson, *Intercourse Between India and the Western World*, pp. 17-18.

4. Mc Crindle, *The Invasion of India by Alexander the Great*, pp. 78-79, 338-39.

5. Arrian, *Indica*, I.

6. Smith, *The Early History of India*, p. 52; Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 225; *Intercourse Between India and the Western World*, p. 33; Mukherjee, *The Culture and Art of India*, p. 91.

7. Plutarch, LX.

8. Mukherjee, *The Culture and Art of India*, p. 96; *A History of Indian Civilization*, p. 183.

9. Fl. C. 520, *Expedition of Scylax to Red Sea*.

10. Kalianial in Herodotus, Unidentified.

the Skiapodes<sup>1</sup> and the city of Aragante. Probably he owed his information about India to Scylax<sup>2</sup>. Herodotus also provides a lot of information about India. His accounts include the details of the voyage of Scylax, of the cotton and bamboos of India, gold digging ants as large as foxes, wool bearing trees surpassing in beauty and in quality, the wool of sheep and a number of myths about India<sup>3</sup>.

In Ktesias's *Indica* (400 B.C.) a Dravidian word *Karpion* can be noticed for 'Cinnamon'<sup>4</sup>. According to Dr. Caldwell, it can be identified with the Tamil Malayalam word *Karppu* or *Karappa* similar to Sanskrit *Karpura*<sup>5</sup>. Some other Tamil words were also borrowed by the Greeks. These are following—Greek *oryza* from Tamil *arisi*, Greek *ziggiberos* from Tamil *injiver*, Greek *peperi* from Tamil 'Pippali', etc.<sup>6</sup> This philological evidence goes to show that the Greeks knew of some south Indian articles which they obtained from India through commercial intercourse. Alexandria was then the famous centre of international trade and cosmopolitan civilization of that time. Here converged the trade routes from Ethiopia, Arabia, India and Egypt<sup>7</sup>. The Greeks were fond of Indian merchandise—rice, peacocks and sandal wood are reported by Sophocles (495-405 B.C.). These articles were probably exported to Greece directly from India<sup>8</sup>. The peacock was an important item of export. It appears that peacock had reached the Greek market by about the 5th century B.C. and became popular in the time of Pericles, when the birds were seen at many public exhibitions<sup>9</sup>.

Greek coins, (Pl. XXI, b) found in India, also testify to the commercial intercourse between the two countries. Two silver coins, bearing the name of Alexander and one silver coin of Philip Arrhideau have been found in the excavations at Bhir Mound in Taxila<sup>10</sup>. On the obverse of the first two coins is a carving of Alaxander's head wearing the lion skin and on the reverse there is Zeus seated on a throne with the eagle in his right hand and the sceptre in the left. According to Marshall, they can be dated to the 3rd or 4th century B.C. This is the first and unique recorded find of Greek coins in India. Marshall holds very strongly that they were brought to India from outside<sup>11</sup>. A few unique silver decadrachms, issued

1. A fabulous race.
2. Rawlinson, *Intercourse Between India and the Western World*, p. 19.
3. Herodotus III, IV; Arrian (*Indica*, VI); Pusalker, *op. cit.*, Vol. 1, p. 152.
4. Mc Crindle, *Ancient India as described by Ktesias the Knidian*, p. 29.
5. Caldwell, *Grammer of the Dravidian Language*, p. 105.
6. Iyengar, "The trade of India", *IHQ*, Vol. 2, pp. 42-43.
7. Pusalker, *op. cit.*, Vol. 1, pp. 152-53.
8. *Ibid.*, p. 152; Mookerji, *Indian shipping*, p. 88.
9. Saxena, "Ancient Contacts Between India and countries across the Arabian Sea", *Indo-Asian Culture*, Vol. XV, p. 48.
10. ASIAR, 1924-25, pp. 47-48, pl. IX.
11. *Ibid.*, p. 47.

by Alexander, found at sites outside India, bear on the obverse a device of an elephant with two riders followed by a warrior on a prancing horse, and on reverse a standing figure of Alexander, shown as the God Zeus. According to some numismatists, the obverse device represents Alexander's battle with Porus<sup>1</sup>, although this view is not acceptable to most of the scholars.

Greek style of coins was also copied by Indian kings. The coins of Sophytes (Saubhuti) who were ruling in the Punjab at the close of the 4th century B.C., are purely Greek in style<sup>2</sup>. This regular intercourse had its impact on Indian culture and Hellenic influence is noticeable in several spheres.

In the *Aṣṭādhyāyī* of Pāṇini there are several references to the Yavanas<sup>3</sup>. The *Carana*, *Gotra* and *Janpada* were three typical Pāṇinian institutions of educational, social and political life<sup>4</sup>. Between the Janpada in India and the city-state in Greece, flourishing at the same time, there was a close resemblance in several aspects<sup>5</sup>. The Janpadas and the city-states both generally had demarcated boundaries (known as *Tadāvadhi*)<sup>6</sup>, and fortified towns as capitals<sup>7</sup>. In the development of the former there were four well-defined stages, designated as *Jana*, *Kula*, *Janapadi-nah*, *Janapada* and their counterparts analogy can be seen in the evolution of the Greek states in the following stages *Genos*, *Phratrics*, *Phulai* and *Polis*<sup>8</sup>.

The emphasis on the purity of blood is another point of similarity between the Janapadas and the Greek city-states. The *Gāṇas* regulated the life of citizens even in such matters as marriage. Somewhat similar was the practice in the Greek city-states<sup>9</sup>. The *gāṇa* and the city-states were communities of men who generally had a common ancestry<sup>10</sup>. The possibility of both these originating from a common source and inspiration cannot be precluded.

Some legends, ideas and philosophical concepts are common to Greece and India. We are not sure in which of the two countries they originated nor do we know for certain the channels through which the contacts were made. Sometimes, it is argued that this close similarity in beliefs and other things can be treated as chance coincidences or the results of independent parallel developments. As

1. *ASIAN*, 1924-25, p. 47.

2. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. 28, 1947, p. 179.

3. Pāṇini's *Aṣṭādhyāyī*, 4.1.49.

4. Agrawala, "Janapada and the Greek city State", *IHQ*, Vol. 30, 1954, p. 38.

5. *Ibid.*

6. *Aṣṭādhyāyī*, IV, 2.124.

7. Agrawala, "Janapada and the Greek city State", *IHQ*, Vol. 30, 1954, p. 39.

8. *Ibid.*

9. *Ibid.*, p. 42.

10. *Ibid.*

to the question who borrowed from whom, each point should be considered separately.

The *Mahosadha Jātaka*<sup>1</sup> appears to be an Indian version of the famous story of the judgment of Solomon. Probably Indians borrowed this legend<sup>2</sup>. Another famous story of Hippokleides, who was careless about his wife at the time of dancing, seems to be similar to the *Jātaka* story of the silly young peacock, who danced so indecently that he shocked the father of the golden goose and lost his wealthy bride<sup>3</sup>. The story of the wife of Intaphernes<sup>4</sup>, who pleaded for her brother's life saying that she could get another son or husband, but not another brother, finds its parallel in the *Uchchhangā Jātaka*<sup>5</sup>.

Indian philosophy seems to have travelled far into the West and influenced philosophical thought there. According to Garbe, the theory of Greek philosopher Thales (6th century B.C.) that every thing comes out from water; and that of Anaximander that the first thing is not water but infinite atmosphere or air which is the root of the universe, basic element is borrowed from almost similar Vedic theories. Probably the Greek exponents learnt these theories when they were in Persia on a mission of pilgrimage for philosophical studies<sup>6</sup>. The theory propounded by Zenophanes (c. 575 B.C.), father of the Eleatic school that God and Universe both are one, eternal and unchangeable is more akin to the spirit of the Indian pantheism than the Hellenic spirit<sup>7</sup>. Furthermore, William Jones has shown that the Sāṅkhya System and Pythagorean philosophy (550 B.C.) have similar features<sup>8</sup>. Similarly, the belief in the transmigration of soul from body to body in the Pythagorean philosophy is supposed to be of Indian origin based on the philosophy of the Brāhmaṇas and *Upanishadas*<sup>9</sup>. According to some scholars, this philosophical concept was taken from India to other countries which were under Hellenistic influence<sup>10</sup>.

The views of Heraclitus (500 B.C.) that "all bodies are the transformations of fire, and that everything that exists is derived from it and strives to return to it", are similar to the thoughts in *Chhāndogya Upanishada*. Garbe compares it

1. Rhys Davids, *Buddhist Birth Stories*, Vol. I, p. 14.

2. Rawlinson, "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, 1914, p. 219; *Intercourse Between India and the Western World*, p. 11.

3. Herodotus, VI, 110.

4. Herodotus, III, 18.

5. *Jātaka* I, No. 67.

6. Pusalker, *op. cit.*, Vol. I, p. 153; Mitra, *India's Cultural Empire and her Future*, p. 13; Also Pande, "Indian Religions and the West", *ICWTC*, pp. 616-622.

7. Mitra, *India's Cultural Empire and her Future*, pp. 13-14.

8. Quoted by Pusalker, *op. cit.*, Vol. I, p. 153.

9. Jairazbhoy, *op. cit.*, p. 82; Sastri, *Age of the Nandas and Mauryas*, p. 81; Pandey, *op. cit.*

10. Mitra, *India's Cultural Empire and her Future*, p. 14.

with the Sāṅkhyā theory of innumerable annihilations and reformations of the Universe<sup>1</sup>. The theory of eternity and indestructibility, propounded by Empedocles (450 B.C.) seems to be borrowed from the system of philosophy<sup>2</sup>. Belief in the transmigration of souls and in the development of the material world out of primeval matter, which is governed by three virtues—lightness, activity and heaviness—is quite similar to three *gunas*—*Sattva*, *Rajas* and *Tamas* of Sāṅkhyā Philosophy<sup>3</sup>.

These similarities of philosophical concepts were perhaps the result of the visits of philosophers of one country to another. On the authority of Aristoxenos (330 B.C.), Eusebius tells a story about the Indian philosopher who found his way to Athens and had an interview with Socrates (469—399 B.C.)<sup>4</sup>. On being told by Socrates that to him philosophy consisted an inquiry into human life, the visitor said with a smile, that no one who did not first understand things divine, could inquire into human affairs<sup>5</sup>.

This story leads us to believe that there was some sort of intercourse between the two countries and Indian thinkers possessed a fair knowledge of philosophy, and perhaps also the language of the Greeks. Plato (427—347 B.C.), the disciple of Socrates, was also impressed by the Indian philosophy. He visited several countries of Asia, especially Persia, and there is a view that he was also in India for some time. His theories of the bondage of soul to matter and its liberation therefrom, as also his doctrine of reincarnation, seem to be distinctly Sāṅkhyan<sup>6</sup>. Urwick says that this philosopher's conception for his republics is probably an echo of Indian ideas and his division of the ideal polity Guardians, Auxiliaries, and craftsmen, is similar to the Hindu caste system<sup>7</sup> Brāhmaṇas, Kshatriyas and Vaisyas. The simile of the cave, referred to in the 7th book of the *Republic*, recalls the Vendantic doctrine of Maya or illusion<sup>8</sup>.

1. Mitra, *op. cit.*, p. 13.

2. *Ibid*; Pusalker, *op. cit.*, Vol. I, p. 154.

3. Mitra, *op. cit.*, p. 13.

4. *Praepartio Evangelica* (c. A.D. 315) XI. 3.

5. Rawlinson, *India*, p. 55; Mitra, *op. cit.* p. 14; Sastri, *Age of the Nandas & Mauryas*, p. 81; Pusalker, *op. cit.*, Vol. I, p. 153; *Cambridge Ancient History*, Vol. VI. 1953, p. 310.

6. Mitra, *op. cit.*, p. 15; According to Hopkins, Plato derived the Sāṅkhyan thoughts from Pythagoras. His simile of the charioteer and the horses recalls the simile of *Kathopanishad* "Of the body with a car, the soul with the charioteer, the senses with the horses and the mind with the reins."

7. Urwick, *The Message of Plato*, p. 29; Rawlinson, 'India' p. 56.

8. Mitra, *op. cit.*, p. 15.

The orphic legend, that Universe was formed in the body of Zeus, after he had swallowed Phanes, the offspring of the great 'world-egg', is almost similar to the story of the coming into being of 'supreme soul by a thought of the golden egg' (*Brahmāṇḍa*) was mentioned in the tenth book of the code of Manu<sup>1</sup>. According to Max Müller, the similarity between Plato's language and that of the *Upanishads* is sometimes amazing<sup>2</sup>. Rawlinson takes these coincidences as accidental<sup>3</sup>; but the probability of Greek philosophers being influenced by Indian thought cannot be ruled out.

There is also the evidence to suggest that Indian logic was influenced by the Greek system. The definition of the most important logical terms and the explanation of various structures seem to have been derived from the prior Analytics of Aristotle<sup>4</sup> (384—322 B.C.). It is said that this system of logic reached Aksapada, the Indian monk, who was residing near Broach in Kathiawar on the sea coast, from Alexanderia. At the former place the Greek philosophical works were preserved in the library through the efforts of Callimachus<sup>5</sup>.

We can also trace some Indian influence on Greek religion. There is a close resemblance between the gods of the Greek pantheon and those of the Vedic Aryans. It has been suggested that God 'Yurenas' of the Greeks may be a form of Varuṇa of India<sup>6</sup>. The Indian god Varuṇa seems to be prototype of the Greek 'Varena', 'Ornos' and 'Yurenas' in order of sequence<sup>7</sup>. Like it, other Greek gods, Zeus, Minerva and Helios, can be identified with Indian gods—Indra, Ushas and Savitar.<sup>8</sup> Buddhism also has something in common with Orphism in Greece<sup>9</sup>. Both sects lived in monastic communities, abstained from taking life or eating meat and believed in the doctrine of Metempsychosis<sup>10</sup>.

The exchange of ideas is also to be seen in other spheres. It was perhaps the Greeks from whom Indians learnt the art of mining<sup>11</sup>. The word 'surang' in Sanskrit<sup>12</sup>,

1. Mitra, *op. cit.*

2. *Ibid.*

3. *Ibid.*

4. Vidya Bhusana, "Influence of Aristotle on the Development of the syllogism in Indian Logic", *JRAS*, 1918, pp. 469-71.

5. *Ibid.*

6. Sharma, *Saṃśāra kī Prāchīn Sabhyatāyen tathā Bhārat se unke Sambandha*, p. 164.

7. *Ibid.*

8. *Ibid.*

9. Rawlinson, *India*, p. 55.

10. *Ibid.*

11. Arrian, VI. 7. Alexander, for example, had undermined the Mallian walls in his campaign down the Hydaspes.

12. Cf. J. Jolly : *Arthaśāstra of Kautilya*; Winternitz, "Suranga and the Kautilya Arthashastra", *IHQ*, Vol. I, p. 429.

meaning mine, seems cognate with the word ‘*Syrinx*’ which is the Greek word for mine. The idea of the palisade may have been introduced through the Indians enlisted in the Greek armies<sup>1</sup>. In the field of medicine also there seems to have been an interchange of ideas. Greek physical conception of the wind was influenced from Indian nervous activity stems. It has been claimed that in the 4th century B.C. “Hippocratic treaties of the winds” was influenced by the Indian conception which was already in vogue in about the 8th century B.C.<sup>2</sup>

Thus it can be presumed that the Greeks and the Indians had close contacts in many fields, especially in the religious beliefs and philosophy, perhaps more in the latter than in the former. These intercourses were of great significance in bringing the people of these two countries together. The contacts appear to have increased with Alexander’s invasion, after which the frequency of contacts between the two peoples must have increased and Greek thinkers perhaps came to India in search of philosophical knowledge. Religion, literature and coinage were other fields of exchange of ideas between the two countries.

The foregoing description makes it clear that India’s relations, cultural, economic as well as political, continued to be strengthened with countries with whom it had earlier contacts. Such countries were Egypt, Judaea, Assyria, Iran, Babylon, etc. In these countries new fields of mutual relationship were discovered. The broadening horizons of India’s contacts did not limit themselves with the existing relations but new regions came into close contacts, such as Ceylon and Greece. The advanced techniques of sea-voyage and road journeys helped the people in this respect. The fact that man’s quest for developing new relations knows no bound is attested by the above mentioned contacts which India developed with other countries during this period.

1. Jairazbhoy, *op. cit.*, p. 50.  
2. *Ibtd.* p. 79.

## CHAPTER IX

# THE PERIOD OF THE MAURYAN CULTURE

The last quarter of the fourth century B.C. witnessed on the ruins of the Nanda Dynasty, the sudden rise of the Mauryan Empire. A number of kingly states and republics located between Macedonia and the Punjab, had just vanished under the onslaught of Alexander's invasion and the Greeks had carved out a prominent position for themselves in this region. It is well-known that although the authority of the Greeks had somewhat weakened after the untimely death of Alexander, the chain of capital cities, founded by him and held by his nominees, had helped them in maintaining their political suzerainty in the area for a long time. Thus, the late fourth century B.C. and early third century B.C. witnessed the emergence of two great political powers in the East : the Mauryan and the Macedonian. The two empires that they founded were also the repositories of two great civilisations of the world—the Indian and the Greek, respectively. That the two met and interacted in a most fruitful manner, is an established fact of history, although the evidence available on the extent and nature of the contact is often fragmentary and not always amenable to historical discipline.

The Age of the Mauryas witnessed the rule of some prominent kings who brought a large part of India under their firm control and who also established close contacts with neighbouring countries, such as Iran, Mesopotamia, Greece, Egypt, China, Central Asia and Śrī Lakanā. Although the Indians were familiar with most of these countries even before the fourth century B.C., as has been mentioned in the foregoing chapters, yet it was only in this period that countries like China and Central Asia, came into contact with India in a meaningful way. The strengthening of political and cultural ties with these farflung areas of Asia and Egypt was the outcome mainly of the efforts of the Mauryan kings, particularly those of Chandragupta Maurya and Aśoka.

The system of exchange of embassies, initiated by the Mauryan kings, was certainly a new tool of Indian polity in developing India's politico-cultural contacts with distant lands. Chandragupta Maurya received Megasthenes from Greece; Bindusara received Dionysius from Egypt, and Aśoka received Ariṭṭha from Śrī

Laṅkā. From time to time, these Mauryan kings also sent their ambassadors not only to the countries from which they themselves received ambassadors but also to a few other countries. It is significant to observe that the embassies did not maintain their relationship with the kings and the courts alone, they contacted the people also. Since these embassies are known to have included distinguished persons in different branches of learnings, each one of them carried the best of the country's talents and the choicest of the country's produce to the other. Thus there was always fruitful exchange of knowledge and material items. When foreign embassies came to India, their members enthusiastically watched and studied Indian customs, manners, festivals, religious ceremonies, traditions, court life, royal processions, administration, art, architecture, etc. On return to their countries, they used their first-hand knowledge in writing informative accounts of Indian life and people. Information contained in them gave better understanding of India's culture to the people of their own countries. The records of Megasthenes, Arrian and other latter Greek historians are only a few of the several outstanding examples of writings of this kind. Indians, in the same way, learnt about the customs and manners, weapons and warfare, science and technology, arts and crafts, etc., of the neighbouring countries, and often adopted them with suitable modifications. Recent archaeological discoveries in the countries bordering India clearly show that the Mauryan Period was the Formative Period in the history of India's cultural contacts with her neighbours in the historical era.

The Mauryan king Aśoka promoted missionary activities not only within the country but also outside the country. These missionaries left their deep impact on the countries they visited and lived in. After the Third Buddhist Council Aśoka despatched his missions to the territory of the Greek rulers in West Asia and countries of South Asia for the propagation of *Dhamma*. As a result of their selfless service and great missionary zeal, some people from China, Central Asia and Śrī Laṅkā came to identify themselves with the aspirations of Indian people. These missionaries, directly or indirectly, were also responsible for the introduction of the then prevalent Indian languages, scripts, sacred texts, art and architecture in those countries.

The cultural contacts, in one way or the other, also helped in developing and intensifying the pre-existing sporadic commercial intercourse between India and her neighbours. Because of the developing relations, Indian traders became quite familiar with these countries. The caravans from India included mercenaries to protect against piracy, priests to propitiate the gods for safe journey, and astronomers to guide the sārthavāhas. During the Mauryan period, India's fame as a repository of knowledge also attracted a large number of foreigners and, it may be added, that they were always provided with necessary facilities. According to

Megasthenes, during the reign of Chandragupta Maurya<sup>1</sup> a board of five members in the municipal administration was exclusively made in-charge of the affairs connected with foreigners. The reference to an officer, called '*Vivitādhyaksha*' in the *Arthaśāstra*, whose duty was to check the passports, may also be taken as a supporting evidence of the sojourn of a sizable number of foreigners in the capital city<sup>2</sup>.

The Mauryan period, therefore, heralded the birth of a new chapter in India's relations with other countries. The directional changes in this relationship were brought about by four major tools : exchange of embassies, the outgoing missionaries, the enterprising traders, devout pilgrims, and casual travellers. In the following pages an attempt has been made to give a somewhat detailed account of these tools and the changes they brought about in the field of India's contacts with the neighbouring countries.

### Egypt

As noted in earlier chapters, India had contacts, howsoever indirect and limited, with Egypt during the third and second millennia B.C. But we have very little evidence of intercourse between the two regions in the post-chalcolithic and pre-Mauryan periods, i.e., between the late second millennium B.C. and the late 1st millennium B.C. During the preceding couple of centuries from the emergence of the Mauryan power, in the sixth and fifth centuries B.C., the north-western part of India came in contact with Egypt, although indirectly, as both the regions formed part of the great Persian Empire.

Historical evidence of a different nature, however, reveals the existence of political as well as diplomatic relationship between the two countries during the Mauryan period. According to Pliny<sup>3</sup>, Dionysius, an ambassador from the Egyptian king Philadelphus (Ptolemy II 285—247 B.C.)<sup>4</sup> visited the Mauryan court. However, as the name of the then ruling king of India is not mentioned, there is a controversy regarding the identity of the Mauryan king<sup>5</sup>. The Egyptian king has been credited with sending an embassy to Rome in the year 273 B.C., and it is likely that he also sent an embassy to India at the same time. In that case the Mauryan king should

1. Strabo, XV, 151; McCrindle, *Ancient India as Described by Megasthenes and Arrian*, Fragment, 34, p. 87.

2. *Arthaśāstra*, 2.34.

3. Pliny, *N.H.*, VI. 58.

4. The identification of king Philadelphus as Ptolemy Philadelphus of Egypt is accepted by all the historians. Cf. Smith, *The Early History of India*, p. 156; Sastri, *Age of the Nandas and Mauryas*, p. 168.

5. Smith thinks that the ruler in question was either Aśoka or Bindusara (*The Early History of India*, p. 156); Saletore, however, identifies him with Bindusara (*India's Diplomatic Relations with the West*, p. 136).

be identified with Bindusara. Nothing is known about the mission of the visit of the embassy. In any case, it certainly marked the beginning of diplomatic relationship between India and Egypt in the historical period.

Asoka's Rock Edict XIII reveals the expansion of his missionary activities in Syria, Egypt, Macedonia, Cyrene and Epirus<sup>1</sup>. There is a reference in this Edict to Ptolemy II (Philadelphus, 285—247 B.C.) the ruler of Egypt<sup>2</sup>. These missions helped the spread of *Dhamma* and might also have fostered diplomatic contacts to some extent. With the exchange of these missions, a regular intercourse developed between the two regions of the ancient world.

In this connection a statement of Athenaeus is extremely interesting. It refers to the presence of Indian women, Indian hunting dogs, Indian cows and camels in the royal processions of Ptolemy Philadelphus of Egypt<sup>3</sup>. This source categorically informs us about a saloon lined with Indian stone in the yacht of Ptolemy II Philopater<sup>4</sup>. It may not be out of place to mention that at Memphis the excavators have found female figurines in terracotta<sup>5</sup> (2nd cent. B.C.) whose facial features and dress are completely Indian. Wheel is a well-known motif in India and it was equally popular in Egypt<sup>6</sup>. Though it is somewhat controversial as to who was the borrower (if it was a case of borrowing) since the motifs were widely used in both the countries, yet it seems more likely because of their continuance in India through the ages, that it was Egypt that was the borrower. In the same context, yet another piece of evidence is equally worthy of our notice. On the desert route to the Red Sea, a temple has been recently discovered at Redesiyat<sup>7</sup>. It was dedicated by an Indian to the Greek God Pan. This points to a close intercourse between the Indians and the Greeks living in Egypt.

1. Hultzsch (ed.), *CII*, Vol. I, p. 66.

2. *Ibid.*

3. Deipnosophistes, IV-4-6 and V. 25, 39, cited by Rawlinson, *Intercourse Between India and the Western World*, pp. 93-94.

4. *Ibid.*

5. Petrie, *Memphis I*, 1909, pp. 16-17, pl. XXXIX.

6. Coomaraswamy, *History of Indian and Indonesian Art*, 1927, p. 17, fig. 12. The representation of wheels between animals on the abacus of Asokan pillar at Sarnath recalls the sun emblems of Egyptian Obelisks at Alexandria (Jairazbhoy, *op. cit.*, p. 57). According to Davar, it was an Iranian symbol. (Davar, *op. cit.*, pp. 54-55). Both the inferences are doubtful and the device could very well be indigenous. An attempt has been made to trace Buddhist influence on revolving wheels of Egyptian temples referred to by Heron of Alexandria. (Jairazbhoy, *op. cit.*, p. 63). The depiction of a wheel with Trident on a Ptolemaic gravestone has been found in Egypt. It might suggest Indian influence (Singhal, *India and World Civilization*, p. 75).

7. Charlesworth, *Trade-Routes and Commerce of the Roman Empire*, p. 59.

Alexander founded a city, called Alexandria, on the Isthmus, which, in course of time, became a great centre of trade between the East and West<sup>1</sup>. From Alexandria the traders followed the route which passed through the Old Suez Canal, and along the Makran Coast, finally reaching the western shores of India<sup>2</sup>. Strabo informs us about the arrival of a few traders in India from Egypt<sup>3</sup>. The establishment of two sea-ports, namely Berenice and Myos Hormos, on the Egyptian coast, was aimed at facilitating trade with India<sup>4</sup>. According to Greek historians, Indian articles, specially ivory, shell, pearls, pigments, dyes, nard, clothing, malabathron and rare woods, were quite popular in Egypt and were imported there from India<sup>5</sup>.

A striking piece of evidence of the Egyptian-Indian trade has been collected by Rostovtzeff<sup>6</sup>. It points out that the financial and economic organization of Ptolemaic Egypt, as embodied in Pseudo Aristotlian-economics, was very similar to that of India under Chandragupta Maurya and his successors, as set-forth in Kautilya's *Arthashastra*. For instance, the organization of state monopolies in oil, salt and mining, as well as what may perhaps be called a kind of state-socialism under the rule of "enlightened monarch" were common to both Mauryan India and Ptolemaic Egypt<sup>7</sup>.

The similarity between some of the Egyptian and Indian astronomical theories<sup>8</sup> could perhaps be traced to the close contacts between the two countries that followed the exchange of diplomatic missions.

The foregoing piecing together of the past history of the relations between India and Egypt may not appear to be as successful as one would like it to be. Nevertheless, when we look at the nature of the evidence, howsoever fragmentary it may be, in the form of exchange of political embassies and cultural missions, commercial contacts, presence of apparently Indian (?) art motifs in Egyptian sculpture, participation of Indian men, women and animals in the royal processions of

1. McCrindle, *Ancient India its Invasion by Alexander*, p. 27.

2. Elphinstone & Cowell, *Ancient India*, p 136.

3. Strabo, IV.

4. Strabo, II, V. 12. See also, Singhal, *op. cit.*, p. 75.

5. Mukerjee, *The Culture and Art of India*, p. 101.

6. Rostovtzeff in *Cambridge Ancient History*, VII, 154.

7. *Ibid*; Heichelheim, "New Light on the Influence of Hellenistic Financial Administration in the Near East and India", in *Economic History*, Feb. 1938, pp. 1-12. The main points of similarity between the Kautilyan and Greek civil and state-institutions are: (i) Contract of mines with payment of fixed rent and percentage of output. (ii) The designation and functions of the financial director mentioned in the *Arthashastra* may be said to be identical with that of the Ptolemaic dioecetes. (iii) There is a close similarity between the Indian land-organization and Ptolemaic agrarian system. (iv) In India as well as in Greece there was complete government control on the production and trade in certain articles. (v) The organization of salt trade in India was quite similar to that of Ptolemaic Egypt.

8. Saleto, *India's Diplomatic Relations with the West*, p. 160.

the Egyptian kings, dedication of a temple to a Greek god by an Indian, the close similarity between some economic organizations in India and Egypt, we are inevitably led to conclude that India and Egypt had close contacts during the Mauryan period.

### Iran

The Achaemenian invasions brought a portion of Indian territory under the Iranian rule, but the effects of that political contact did not go deep into the fabric of Indian culture and change it in any appreciable manner. During the third cent. B.C. when the Mauryan Empire extended up to the eastern borders of Iran the Indo-Iranian contacts became wide ranging. The main features of this contact may be seen in the following spheres: first, art, architecture and town planning; secondly, court-life and administration; thirdly script, edict and numismatics; and finally, customs and manners of the people<sup>1</sup>.

There is a widespread feeling among scholars, including Ray, excepting scholars like John Irwin, that the use of stone in art and architecture of India started from the time of the Maurya, and that this practice was borrowed from the Iranians<sup>2</sup> who had a long tradition of using this material in art and craft, as well as

1. Before each of these is detailed separately, a word may be said about the controversy of the Iranian origin of the first Mauryan king. The origin of the Mauryas has been a controversial topic in the past. Opinions were divided on the parentage of the first ruler of the dynasty. The consensus of opinion among the scholars is that the Mauryas belonged to a native clan of the Kshatriyas, (*Sastri, Age of the Nandas and Mauryas*, pp. 140-143) and not to an Iranian house of the famous city of 'Meru' as was once held by Spooner ('The Zoroastrian Period of Indian History', *JRAS*, 1915, pp. 416-17.) It is true that the early life of the founder of the Mauryans dynasty is shrouded in mystery and like a few other firsts of the ruling dynasties of the world he was of humble birth. Curiously enough, the lineage of Chāṇakya (*Ibid*), his Prime Minister, has also been traced by Spooner to Iran, on the ground that Chāṇakya was a great astronomer and, Iran and not India, was leading in oriental astronomy. This seems to be far fetched. Detailed studies (Bose, Sen, Subbarayappa, *A concise History of Science in India*, p. 60) have clearly shown that firstly, the Indian School of Astronomy was very different from the Iranian school; and, second, Chāṇakya is more known for his book on polity and administration than for the knowledge of astronomy.
2. Pusalker, *op. cit.*, I, p. 151. According to this view the use of stone in the time of the Mauryas was the result of Greco-Persian contacts. Rawlinson ('Foreign Influence in the Civilization of Ancient India', *JBRAS*, Vol. 23, p. 228), on the other hand, thinks it to be the result of Greek influence exclusively. John Irwin, however, feels that all the so-called Aśokan pillars were not the creation of the king Aśoka; they were of two series: one, "A", found with Aśokan edicts, and one usually without them, the former more elegant and planted on rectangular blocks of stone, and, the latter, "B", rather crude and planted directly in the ground without any extra-base. According to this author, the pillars of the latter series were pre-Mauryan. ("Aśokan Pillars: a reassessment of the evidence", *Burlington Magazine*, Vol. CXV, 1973, pp. 706-720; CXVI, Dec. 1974 pp. 712-726). Series "A" pillars include

in architecture. As a corollary to this view is the opinion that the indigenous medium of art and architecture in India was essentially wood, an easily perishable material in the Indian climatic condition. There are two main arguments advanced in support of this view: the absence of an unimpeachable evidence to show that stone was used in the pre-Mauryan edifices and ; secondly, practically all the rock-cut caves of the second century B.C. show both the actual use of wooden beams and rafters and lintels and also the ones carved in stone itself on imitation of wooden ones. Archaeological evidence certainly favours the view according to which stone was not used as building material in any appreciable quantity in the Pre-Mauryan period. The limited use of stone in house-building activities in the first city of Taxila, *i.e.*, at the Bhîr Mound, is also not very much earlier to fourth century B.C.<sup>1</sup> Similarly, the cyclopean wall of Rajgriha, which was supposed to have been built in the sixth century B.C., is also of doubtful antiquity<sup>2</sup>; the palace complex at Kauśāmbī is also of an uncertain date; none of these often quoted examples seems to be of the Pre-Mauryan period<sup>3</sup>.

It is, however, not very clear from the available evidence that the use of stone in art and architecture came entirely from Iran. Thus although the capitals of the Aśokan pillars show strong resemblance with the Iranian examples of the similar category, and the system of edicts inscribed on pillars and on the face of the rocks, also closely resembles an age-old Iranian practice, yet the Barabar caves<sup>4</sup>, excavated and embellished under the patronage of Aśoka, do exhibit a purely Indian tradition of working in stone. Similarly, the huge elephant in front of the arched gateway carved on the cave rock at Dhauli<sup>5</sup> go a long way to prove that there were local stone-cutters, although the quality of their workmanship was not very high. Probably the best example of the work of Indian sculptors of the period is Rāmpurvā bull capital and the low-relief portrayal of gees on the abacus of its capital. In this connection it has also been pointed out that the stone sculptures of Sanchi and

Sārnātha, Topara, Lauriyā-Nandangarh and Gotihāwā; while series "B" include Rāmpurvā, Sankisā, Kauśāmbī and Vaīsālī pillars. But pillars of both the series are completely indigenous. He rules out the objection of Ray that Indians had no technological competence in terms of iron implements, such as heavy anvils, chisels and hammers, to work out monolithic pillars and sculptures in round for he feels that those adept in wood, copper, bronze, gold, ivory and silver can easily shift to iron. Gupta agrees with him and also points out that iron technology came to India in 1000 B.C. and in a developed stage as can be seen from the plethora of iron objects in pre-Aśokan megalithic graves, and several habitational sites of the Early Iron Age from Baluchistan to Ganga basin.

1. Ghosh, *The City in Early Historical India*, pp. 67-70.

2. *Ibid.*

3. *Ibid.*

4. Ray, *Maurya and Sunga Art* (1965), p. 44.

5. *Ibid.*, pp. 34-35.

Bharhut, of the second country B.C., do depict the scenes of cities with high walls, arched gateways and windows, all using stone masonry, suggesting that India had tradition of stone architecture. But these pieces of evidence do not take the tradition of stone sculpture to the Pre-Mauryan period. Still there are scholars who quote extensively from the *Rāmāyaṇa* and *Mahābhārata* to support the view that there were great cities with monumental stone-structures but Sankalia has recently reviewed all these view-points particularly with regard to the cities mentioned in the *Rāmāyaṇa* and has very pertinently remarked : "The literary evidence is unreliable because it is not only stereotype but also comparatively late"<sup>1</sup>.

All these views and available evidence have been thoroughly discussed by Ghosh, who has also arrived at a similar conclusion<sup>2</sup>. It may, therefore, be concluded that although it is difficult to judge the exact amount of Iranian contribution to the development of Indian stone art and architecture, yet it cannot be denied that the practice did start in the Mauryan period and the possibility of some significant influence of the Iranian examples on it cannot be ruled out. There were, however, two traditions running side by side in the Mauryan period itself: one was of the court-art which seems to have borrowed from Iranian and other West Asian sources, and the other was of the folk-art which was developing on its own. How much both of them influenced each other in India is a matter of controversy but it has been held by Ray that the Mauryan court-art died with Aśoka, while the folk-art continued and reached its zenith in the succeeding Śunga period. We, however, agree with Devahuti<sup>3</sup> that Mauryan art traditions did not form only an 'episode' in Indian Art History, they continued in the Sunga period. We need hardly mention the depiction of monolithic pillars, lion capitals and all the art motifs on the Mauryan abacus in the sculptural art of not only Sanchi, Bharhut, Pauni but also Karle, Bhaja, Bedasa and Kanheri. 'Mauryan abacus' with 'Mauryan polish' has been found in the Śunga levels of Kauśāmbī<sup>4</sup>. It is extremely significant to note that it has also a double humped camel on it which is known as 'Bactrian camel', clearly enough, it shows the adoption of a Central Asian motif. We may also mention the Didarganj Yakshi of 2nd cent. B.C. which has Mauryan polish.

Megasthenes, the Greek ambassador at the court of Chandragupta Maurya has spoken highly of the Grand Trunk Road (Royal Road) connecting Pataliputra, the Mauryan Capital-town in Bihar, with the great cities of north-western India<sup>5</sup>.

1. Sankalia, Review of *The City in Early Historical India*, *Purātattva*, No. 7, pp. 108-110.
2. Ghosh, *The City in Early Historical India*, pp. 67-70.
3. Devahuti, "Mauryan Art and the "Episode" Theory", *ABORI*, Vol. LII, Poona, 1972, pp. 161-173.
4. Sharma, *Excavations at Kauśāmbī*, p. XIX.
5. Pliny, *N.H.* VI. 21.

His impression of this road is so vivid that some of the scholars in the past felt that the road was fashioned and laid on a model already existing in Iran through which Megasthene came to India<sup>1</sup>. There is hardly any way to judge the validity of this statement but it easily comes to mind that if the Indian road was just a copy of a pre-existing model in Iran Megasthene would not have spoken about it with a feeling of astonishment. The road used for military purposes by Alexander and his successors were turned into permanent routes for commercial and cultural intercourse. Thus, there was an opening of cultural roads in the whole region extending from the heart of India to Asia Minor in the west, and Central Asia in the north-west.

Magasthenes was impressed not only by the Mauryan high way but also by the town-planning of the capital city of Magadha. He compares it with the town-planning of Susa and Ecbatana in Iran; he even states that Pataliputra was far more beautiful than either of the two<sup>2</sup>. How far, if at all, Pataliputra was also conceived on the Iranian pattern is difficult to say in the present state of our knowledge<sup>3</sup>. Archaeological excavations<sup>4</sup> at Pataliputra have yielded a great pillared hall in the palace-complex which, as some scholars hold, was planned on the Iranian pattern although this view has been contested by V.S. Agrawala<sup>5</sup>. The rest of the town, however, does not seem to conform to the typical grid-pattern of the Iranian towns. Spooner<sup>6</sup> and Wheeler<sup>7</sup> maintain that the square pillared-hall of the Mauryan palace was designed on the pattern of the Achaemenid Hall of Hundred Columns, built by Darius Hystaspes at Persepolis. According to

1. Rawlinson, "Intercourse Between India and the Western World", pp. 29-43; "Foreign Influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 228.
2. McCrindle, *op. cit.*, Fragment XXVI, pp. 67-68.
3. Ray, *Maurya and Sunga Art*, pp. 17-18. He feels that similarity between the town planning of Pataliputra and Susa and Ecbatana is not without significance.
4. Spooner, "Mr. Ratan Tata's Excavations at Pataliputra", *ASIAR: EC*, 1912-13, pp. 56-57.
5. Agrawala, *Indian Art*, pp. 104-105. He discounts the resemblance between the Mauryan and the Persian palaces and considers the Indian one to be of indigenous origin. According to him, there is a difference between the stone column of the Mauryan hall and pillars in the palace hall at Persepolis. Firstly, stone columns of the Mauryan hall at Pataliputra do not show any capitals whereas the pillars in the palace-hall at Persepolis are provided with figured capitals; secondly, the Iranian pillars stand either on bell-shaped bases or on plain circular mouldings whereas the Mauryan columns had no base at all; and finally, "The testimony of the Greek writers that the Mauryan palace was much superior in all respect to the Achaemenian Palaces at Susa and Ecbatana is strong enough to rule out the participation of foreign artists in the building of the palace; if they should have done better in their home".
6. Spooner, "The Zoroastrian Period of Indian History", *JRAS*, 1915, pp. 63 ff., 403 ff; "Mr. Ratan Tata's Excavations at Pataliputra", *ASIAR: EC*, 1912-13, pp. 56-57.
7. Wheeler, "Iran and India in Pre-Islamic Times", *AI*, No. 4, p. 96.

Waddell<sup>1</sup>, the excavator of Pataliputra, the ground floor of the palace was made on the model of Persepolis. This view, has been refuted by Chanda<sup>2</sup>. Further, according to Greek writers<sup>3</sup>, the Mauryan palace was much superior in all respects to the palace of Susa and Ecbatana. However, a mason's mark on one of the stones bears some similarity to a mark at Persepolis<sup>4</sup> and the pillars are characterised by the lustrous polish, which adornment, according to some was, borrowed from Persia<sup>5</sup>.

Aśoka's monolithic columns, usually made of 'Chunar sandstones'<sup>6</sup> and characterised by a unique lustre were made and polished, according to some scholars, except John Irwin of course, as said earlier, after the Persian examples<sup>7</sup>.

1. ASIAR: EC, 1912-13, pp. 56-57.
2. Chanda, "The Beginning of Art in Eastern India", MASI, No. 30, p. 12.
3. Aelian, XIII, 18-1.
4. Ray, *op. cit.*, p. 18.
5. Ray, *Ibid.*, p. 48; Herzfeld, *Iran in Ancient East*, p. 321; According to V.S. Agrawala, (*Indian Art*, pp. 108-09) the antiquity of bright polish is much greater in India than in Iran. He provides several points in his support. Āpastamba *Srauta sūtra* and the *Brihatkalpa sūtra Bhāshya* (Vol. I, *gāthās*, 471-72) reveal the production of such polish. Northern Black Polished Ware, found over a large part of India at Mauryan and Pre-Mauryan sites, has a highly lustrous polish, black violet or variegated. This shows that in the history of country's art there was a period of several centuries in which there was a wide spread movement for preparing a glistening mirror-like surface on the articles in popular use. He feels that this technique was taken from India to Iran, if at all it existed there, since we have the testimony of Darius himself in his foundation characters that for building his palace at Susa and Persepolis, he had imported skilled Indian workmen who presumably must have been all versed in the best traditions of this country.
6. Although the stone is known after a small town near Mirzapur in Uttar Pradesh, Dr. S. P. Gupta personally informs me that the actual spot from where the stone came should be some 40 km. away in the jungles of the Kaimur ranges since at Chunar sandstone is soft and of coarser grains than that of the pillars.
7. Ray, *Ibid.*, p. 31; Unvala, "Political and Cultural Relations Between Iran and India", ABORI, Vol. 28, p. 176; Jairazbhoy, *op. cit.*, p. 55. According to Jairazbhoy, the idea of erecting the pillars may have been suggested by the Greeks, because in Greek myths Hercules sets up pillars in the West to mark his victory. According to John Irwin, the conceptual origin of the Aśokan and Pre-Aśokan pillars lies in the *dhvaja stambhas* repeatedly mentioned in the Vedic and Epic literature. He has quoted the representation of a lady horse-rider carrying in one hand a round pole surmounted by a *kinnar garuda* (*garudadhvaja*) in a Bharhut sculpture (2nd cent. B.C.) housed in the Indian Museum, Calcutta. He also feels that on conceptual level it might be connected even with the Vedic sacrificial *yūpas*, as mentioned in the *Rigveda* and *Śatapatha Brāhmaṇa* and a stone example of which, dated to the first century A.D., was discovered at Isapur, near Mathura, and reported by J. Ph. Vogel in the ASIAR, 1910-11, pp. 40-48 and pl. XXIII. He traces the same tradition even in the Heliodorus Pillar. (John Irwin, "The Heliodorus Pillar. A Fresh Appraisal", *Art and Archaeology Research Paper*, 102, St. Paul's Road, London, No. 1, No. 6, 1947, pp. 1-13). Revised version in *Purātattva* No. 8 (1976).

Similarly, according to them, the capitals on these columns do show unmistakable evidence of Persian traits viz., bell-shaped top and crowning figures (Pl. XXIV c). The seated lions on the famous capital at Sarnath (Fig. 81 and Pl. XXIV a) and the seated lion on capital at Lauriya Nandangarh (Fig. 78) seem to be inspired by the Persian representations<sup>1</sup> (Fig. 79). Irwin traces its origin to a very old practice—copper guided examples<sup>2</sup> (Pl. XXIV b). S.P. Gupta<sup>3</sup> has, however, rightly pointed out that in the entire history of Indian art we have no example of an image with bitumen core covered with gilded copper sheet; the Nepalese and Kerala examples are of a different category. Ray<sup>4</sup>, however, agreeing with Coomaraswamy feels that the bell form as supporting base in Persian pillars (Fig. 80) and a capital in Mauryan columns (Fig. 81) might have been borrowed from stylised lotus design, a common motif of Indo-Perso-Hellenic art. Agrawala<sup>5</sup>, also John Irwin, maintains that the "Mauryan

1. Marshall, "Archaeological Exploration in India, 1906-7," *JRAS*, 1907, p. 997. Marshall also took it to be of Persian origin. He, however, pointed out that originally it was Greek influence but it developed in Persia. According to Ray, the idea may have come from West Asia. He also mentions the similarity between the Mauryan lions and decadent colonial Greek works in their plastic vision, in conventional modelling, in form and design. The place of its origin might have had the complex culture of both Medo-Achaemenian and Hellenistic cultures, (*Maurya and Sunga Art*, p. 42.).
2. Irwin, "Aśokan Pillars: a reassessment of the evidence", *The Burlington Magazine*, Vol. CXVII (Oct. 1975), p. 632. In this connection he, in a lecture at *New Delhi*, showed a slide of a prehistoric lion from West Asia whose core was of bitumen, but the surface had a cover of thin sheet of copper, as we have shown here from an example from Al' Ubaid in Mesopotamia.
3. Gupta, Comments on Irwin's hypotheses. Cyclostyled copy, "Aśokan Pillars: Icono-Functional Approach".
4. Ray, *Maurya and Sunga Art*, p. 32; Mukerjee, *A History of Indian Civilization*, p. 198. Mitra feels that the bell-shaped capital, smooth unfluted shaft, and polish of these columns were of Assyrian origin and borrowed from the Assyrians directly. Mitra, "Origin of the Bell Capital", *IHQ*, Vol. VII, p. 226. Irwin accepts this view in preference to Greco-Persian theory.
5. Agrawala, *Indian Art*, pp. 104-108; Agrawala feels that there is a vast difference between the Mauryan and Persian columns. He has given several points of dissimilarities in his support—firstly, the Iranian pillars stand either on bell-shaped base or on plain circular moulding whereas the independent Mauryan columns had no base at all. Secondly, the bell-form used in the base of the Persian pillars is a part of the capital in the Mauryan columns and produces a different effect. Thirdly, in form and appearance the so-called Mauryan bell is long way off from the Iranian bell. The latter consists of a ring of petals or reels on the upper end, but has no bulge in the middle portion from which the so-called Mauryan bell derives so much beauty. Moreover, the so-called Mauryan bell is made to approximate as nearly as possible the Indian traditional designs of pot and foliage (*pūrāṇaghaṭa*) rendered in a stylised manner. The long lotus leaves covering the outside of the vase and coozing from its mouth have entirely no meaning for a bell. Fourthly, the Achaemenian shaft is made up of several segments while the Mauryan pillars are monolithic. The Persian columns show the requirement of stone while the Mauryan pillar is connected with the originals of timber contruc-

column is no doubt an original construction of indigenous art of that period". To us however, Smith seems to be much more near the truth when he says that "the bas reliefs on abacus recall Assyrian and Persian (Fig. 86) proto-types which might very well have been modified by Indian concepts"<sup>1</sup>, since in spite of certain common motifs the Indian columns show many differences from the Greek, Assyrian and Iranians ones (Fig. 83). Thus, although we agree with Agrawala and John Irwin that on conceptual level the Aśokan pillars need not be foreign either in concept or form yet since no one has been able to quote a single example of stone or wood pillar of this kind in India belonging to a date definitely pre-Mauryan, we feel that the birth of the Aśokan pillars should be seen in the combination of the Indian thought of *axis mundi* and wooden examples on the one hand and the West Asian stone examples on the other. Similarly while motifs like acanthus leaves and bead-and-reel may have come from Assyria directly or through the Greco-Persian examples, the bell certainly represented Indian lotus, and the gees, elephant, bull, rope, rosette belonged to the stock of the Indian art motifs (Pl. XXIII).

During the course of his excavations at Pataliputra, Waddell<sup>2</sup> discovered a beautiful capital which he described as 'quasi-persepolitan' (Fig. 82). This is one of the rare examples of capitals, so much admired and commented upon. He also felt that "the immense importance of this find is that it is the most Grecian sculpture yet found in India, excepting the capitals of Aśoka's pillars and the Indo-Grecian statues and friezes of the Punjab; and that it is found within the palace precincts of Aśoka's own capital and is probably of Aśoka's own age"<sup>3</sup>. According

tion. Fifthly, both the columns mark the difference of figures in capitals. Persian capitals are crowned with a cluster of stylised palm-leaves and consist of two human headed bulls or lions while Mauryan capitals show animal figures, but not human-headed, and the so-called bell form covered by a stylised lotus petals. The crowning abacus and its decoration as found in Mauryan examples are, therefore, different. Lastly, the Persian columns were introduced to form part of elaborate architectural construction, while the Mauryan columns were intended to serve as independent monuments and designed to produce their effect as such. He further feels that the *Dharmachakra* and the four lions symbolise the *Dharma* and the might of 'Chakravati king' and do not reveal any Persian influence. See also his, *Chakraddhvaja* for a very detailed analysis of these pillars—as objects of art as well as symbols of *axis mundi*, the latter aspect has been further developed by Irwin.

1. Smith, *A History of Fine Arts in India and Ceylon*, p. 60. For example, acanthus leaves found on the Persian capitals also occur on Mauryan pillars although in a slightly modified form. Irwin traces the practice in the Egyptian examples. He feels that the Assyrians and Greeks borrowed the usage of free-standing pillars crowned with animals from the Egyptians. Indians seem to have picked up some motifs from the Assyrians directly, and not from the Greeks.
2. Waddell, *Report on the Excavations at Pataliputra (Patna)*, Pl. II.
3. *Ibid.*, p. 17.

to Wheeler<sup>1</sup>, this capital belongs to an earlier phase of transplanted Achaemenian craftsmanship. According to Rowland<sup>2</sup>, "The Greek Ionic, the Persepolitan capital, and the present variant at Pataliputra are all parallel derivations from one original form such as the Aeonic or, as has been suggested by at least one scholar, from a Sumerian pictograph symbolising polarity". In our opinion, Rowland, like Wheeler, is also not correct since the resemblance appears to be of a generalized kind and not specific. Indian genius could draw upon the totality of a culture and then turn it into their own mould; this has happened throughout the early history of India.

The origin of the Indian rock-cut caves has some times also been traced to the Persian rock-cut tombs of Darius and others located at Persepolis and Naksh-i-Rustam<sup>3</sup>; but it is still a moot point. On the basis of a number of Buddhist sources, such as the *Chullavagga*, it has been made out that the First Buddhist Council took place during the time of king Ajatasatru in a cave at Rajgriha<sup>4</sup>. It is stated in the Pali Chronicle that the cave in which the council met was called 'Saptaparni' which was situated on the site of mount Vebhar<sup>5</sup>. The inference is that the practice of making rock-cut caves had started in India as early as c. 5th century B.C. and that it had hardly anything to do with the Persian examples. It may, however, be pointed out that the Saptaparni cave has not as yet been finally identified; it may be any of the several caves, both natural and carved, still intact in Rajgriha.

Some other Indian examples of sculptural art belonging to this period also seem to show some Iranian parallels. Two polished sandstone heads from Sarnath, one with a crenellated crown and the other with drooping moustaches (Pl.XXII b and a respectively) and two Patna Yaksha statues wearing waist cloth and armlets bear a close likeness of certain figures and ornaments in Iran<sup>6</sup>. The two heads are of particular importance since their facial features are absolutely non-Indian. Similarly, the head-gears in both the examples do not tally with any known Indian examples of the contemporary period. The overall treatment of the facial features, including the eyes, clearly shows that in them we have very good examples of 'portrait art' representing certain West Asian noblemen who adopted Indian way of life. These are very good examples of contacts between India and West Asia. The winged-lion motif,

1. Wheeler, *Early India and Pakistan*, p. 177.

2. Rowland, *The Art and Architecture of India*, (Second edition), p. 43.

3. Sharma, "New Light on the Origin of Stone architecture and true arch in India", *Paper Read at Twenty-sixth International Congress of Orientalists*, New Delhi, 1966; Altekar, "Origin and Early History of Coinage in Ancient India", *JNSI*, Vol. XV, Pt. I, 1953.

4. Bapat (Ed.), *2500 years of Buddhism*, p. 32.

5. *Ibid.*

6. Ray, *Maurya and Sunga Art*, p. 17; Mitra, "Origin of the Bell Capital", *IHQ.*, Vol. VII, p. 230.

found in some early Indian sculptures from Kausāmbī and Paṭaliputra, seems to have been adopted from Iran<sup>1</sup>. Waddell<sup>2</sup> excavated a pair of griffins at Patna (Fig. 84) and Piggott<sup>3</sup> identified them as throne fragments. They have been compared with the throne carved in the Nakhsh-i-Rustam reliefs. One of the griffins seems to be a counterpart of a bronze leg of a Persian throne (Fig. 85). Other specimens of throne fragments suggest the same derivation. It may, however, be pointed out that since the concept of mythical animals with wings (*vyālas*) was already there in Indian literature, it could have been represented in the Indian art independently. The evidence, therefore, needs further corroboration. The excavations at Bhir mound<sup>4</sup>, Taxila, unearthed a few minor antiquities, such as the four bangles of thin beaten gold with lion's head, and a few pieces of pottery with conventional leaf design. Their characteristic Iranian designs suggest that they may have been imported<sup>5</sup> from somewhere in Iran. Aśoka for the first time in India started engraving edicts on rocks and pillars. Did Aśoka innovate it or did he borrow the idea from Iran where it was in vogue for a long time? It is difficult to be categorical on this issue, but an interesting parallel between the Indian and Iranian examples may be quoted. The text of Aśokan inscriptions<sup>6</sup> contains certain passages which recall those in the text of the Behistun and Nakhsh-i-Rustam inscription of Darius I :

I "Devānāmpiya Piyadasi rājāevam āha"<sup>7</sup>  
"The king, the beloved of gods, Piyadarsi speaks thus".

\* \* \* \* \*

II "Thātiy Dārayavaush Kshayāthiya....."<sup>8</sup>  
"Thus said the king Darius....."

On the basis of this resemblance it has generally been held that Aśoka adopted the style of rock inscription from the edicts of Darius<sup>9</sup>. The Aramaic script of the Iranian empire and the Kharoshthi script (which was derived from the former) used widely in north-western India, Central Asia and other regions

1. Sharma, "India and Central Asia from c. 6th century B.C. to 6th century A.D." in *Central Asia*, p. 112; Piggott, "Notes on certain metal pins and a mace head in the Harappa Culture", *AI*, No. 4, 1947, p. 101.
2. Ray, *op. cit.*, pp. 106-7.
3. Piggott, "Notes on certain metal pins and a mace head in the Harappa Culture", *AI*, No. 4, 1947, pp. 101-103.
4. *ASIAN*, 1924-25, p. 48, pl. VIII, fig. (d).
5. *Ibid.*
6. Sircar, *Select Inscriptions*, p. 19.
7. *Ibid.*, p. 19.
8. Senart, "The Inscription of Piyadasis", *J. Ant.*, Vol. XX, pp. 255-56.
9. Rawlinson, *Intercourse Between India and the Western World*, p. 29, See also Wheeler, *Early India and Pakistan*, p. 175; Thapar Aśoka and the Decline of the Mauryas, p. 127.

were prevalent side by side in India during the period. The occurrence of an Aramaic inscription at Sirkap<sup>1</sup> also indicates Iranian influence in the region since it presupposes the existence of some people in the city who knew this script.

Recently Goyal<sup>2</sup> has summarised the main characteristics of the Aśokan and Achaemenid edicts. Obviously, they are so similar that the former appear to have been modelled on the pattern of the latter, implying close contacts between India and Persian world. Thus (i) the opening formula of the Aśokan edicts, as shown above, is the same as that of Achaemenids, (ii) Aśoka has used the term *lipi* (in his Brahmi inscriptions or *dipi* (in his Kharoshthī edicts) which was certainly taken from the Iranian inscriptions. Here it is interesting to note that the terms *lipi* and *lipikāra* were known to Pāṇini who lived in an area which was or had been under Iranian hegemony, but do not occur anywhere in the early Buddhist records. In the Shahbazgarhi edict Aśoka uses the participles *likhita*, *lekhita* and *lekhāpitā* which are supposedly derived from the ancient Persian *nipish*, 'to write', (iii) the Kharoshthī script was prevalent in the north-west India even in the Pre-Aśokan period; and lastly, (iv) many of the scribes, like Ghapada, employed by Aśoka to engrave his records were the persons who hailed from the north-west region.

Persian influence may also be seen on the system of administration, court manners and etiquette, etc<sup>3</sup>. The north-western parts of the Mauryan empire which had been under the Achaemenid rule a century or two earlier were divided into provinces designated in the Persian style, as 'satrapies', and headed by the Mauryan governors, who bore the Persian title 'satrap'<sup>4</sup>. This was probably essential in view of the fact that the local population was used to these terms during the previous two centuries and the Mauryan rulers perhaps did not consider it desirable to introduce new terms. According to the Junagarh inscription<sup>5</sup>, Yavanrāja Tushaspha was a governor of Aśoka in the western part of his empire; the name suggests, that he was an Iranian<sup>6</sup>. This evidence shows that some of the Iranians in India held important administrative offices.

The style of living of the Mauryan emperors, as recorded by Megasthenes, was, to a great extent, like that of the Persian monarchs<sup>7</sup>. They lived in the solitude

1. Sircar, *Select Inscriptions*, p. 81; Ep. Ind., Vol. XIX. p. 251 ff.

2. S.R. Goyal in a privately circulated paper.

3. Pusalker, *op. cit.*, p. 151.

4. Rawlinson, "Foreign influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 227; Smith, *The Early History of India*, p. 153.

5. Ep. Ind., Vol. VIII, p. 36.

6. Rawlinson, "Foreign influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 228; Muller, *Ancient Sanskrit Literature*, p. 501. *Yavana* does not indicate only Greeks. It was also used for the people of the Semitic nations.

7. McCrindle, *op. cit.*, pp. 71-73; see also, Rawlinson, *Intercourse Between India and the Western World*, p. 28.

of the palace-chamber under heavy guard<sup>1</sup>. The same source<sup>2</sup> categorically states that the court of Chandragupta Maurya was held very much like the court of the Persian kings. There was a tradition of taking out royal processions on festivals<sup>3</sup>. They were arranged in the following manner : first there were the elephants decorated with gold and silver ornaments, after them came four-horsed chariots and yoked oxen. Then followed the attendants, wearing a holiday dress, and holding in their hands golden cups, goblets, boards, etc. Some of them dressed in colourful garments, lead wild beasts, such as the lions, leopards, etc. Whether it was a copy of a similar royal processions of Persia or was a local innovation, cannot be said for certain but it is possible that while on the one hand Chandragupta Maurya followed an Iranian practice, the Iranian themselves added colour and grandeure to their own royal processions by adding the most majestic animal of the world brought from India, the elephant<sup>4</sup>.

In customs also we see much in common between Iran and India. The *Arthaśāstra*<sup>5</sup> informs that the shaving of the hair was a kind of punishment in India, and a similar practice is to be seen in Iran also<sup>6</sup>. Another custom common to both India and Iran was the hair washing ceremony of the king on his birthday<sup>7</sup>.

The Achaemenid measure of money, a talent, also seems to have been borrowed by the Indians from Iran<sup>8</sup>. According to Rawlinson, the Mauryas did not have a regular coinage of their own, so the Persian coins were in free circulation in their dominion<sup>9</sup>. But recent excavations at several sites have proved that coins were minted in India earlier than the Mauryan period<sup>10</sup> going back to the fifth century B.C., if not still earlier. It is very likely that Indian coinage in its early stage was

1. McCrindle, *op. cit.*, pp. 71-73; see also, Rawlinson, *Ibid.*, p. 28.
2. McCrindle, *op. cit.*, pp. 71-73; Smith, *The Early History of India*, ch. V; Rawlinson, "foreign influence in the Civilization of Ancient India", *JBBRAS*, Vol. 23, p. 227.
3. Strabo, XV, I, 69; see the Account of the Procession of Antiochus, Epiphanes and Ptolemy Philadelphus in *Athenaeum*, IV, 4.5.
4. Seleucus got 500 elephants from Chandragupta Maurya as a part of a treaty between them; and Antigonus got several of them at a later period.
5. *Arthaśāstra*, IV, 9.
6. Smith, *The Early History of India*, p. 137.
7. Herodotus, IX, 110, Strabo, XV, I, 69.
8. Decourde manche, "Note Sur 1 ancient systems metriquedel Inde" in *Journal Asiatique*, 1911, II, 361, as quoted by Jairazbhoy, *op. cit.*, p. 43.
9. *Cambridge Ancient History*, Vol. VI, 1927, p. 402.
10. Ray, *Numismatic Notes and Monographs*, 8, Numismatic Society of India, Varanasi, 1959. Also, Gupta, "C-14 dates determining the chronology of N.B.P. Ware and Punch Marked coins", in *The Chronology of this Punch Marked Coins*, Ed. A.K. Narain and Lallanji Gopal, (Proceedings of the Seminar on Punch Marked Coins), Banaras Hindu University, (1966), pp. 39-42.

influenced by the Persian system of coinage. The Persian *Sigloi* must have been the legal tender in the Persian satrapies in India<sup>1</sup>.

The known evidence cited above makes out a very good case for a close Indo-Iranian contacts during the Mauryan period. It clearly shows that in several fields—art and architecture, town plannings law and court-life, and also the social customs and manners, the contemporary Irano-Greeks contributed to the growth of Indian culture something or the other, directly or indirectly. However, it must also be borne in mind that it was not a one-way traffic; India, as has been shown above, also had a lot to offer to those people in the fields of science, philosophy and economic growth.

### Hellenistic World

Alexander's invasion brought India into close contact with the Hellenistic world and these contacts continued to develop in the year after Alexander. Seleucus, one of his successors, incharge of the eastern parts of his empire, suffered a defeat at the hands of Chandragupta Maurya and made peace with him<sup>2</sup>. He had to cede the four Greek provinces: Satrapies of Paropamisadae (Kabul), Aria (Herat), Arachosia (Kandhar) and Gedrosia (Baluchistan), and in return he only received five hundred Indian elephants<sup>3</sup>. This was followed by a matrimonial alliance<sup>4</sup>, the exact nature of which is not known. To cement this friendship, Seleucus further deputed an ambassador, Megasthenes<sup>5</sup> by name, to the Mauryan court and we learn from *Athenaeus* that the Indian king (Chandragupta Maurya) sent some precious gifts including some Indian drugs, to the Greek Satrap<sup>6</sup>.

These friendly relations with Seleucid house continued from generation to generation through the exchange of embassies. According to Strabo<sup>7</sup>, Antiochus Soter (281—260 B.C.), a Seleucid king sent *Daimachus of Plataea* as his envoy to the court of Bindusara. Other writers have also referred to the close relation between the two countries. *Athenaeus* (3rd century A. D.) citing Hegesander, says that this second Mauryan king asked Antiochus I to send him wine, dried figs and a Greek

1. Macdonald, "Ancient Persian Coins in India" in A.J. Rapson, *Indian Coins*, 1818, p. 34.

2. *Plutarch*, *Libes*, Ch. LXII; *Strabo*, XV, 1.10, 2-9.

3. *Ibid.*

4. *Appianus*, *Syriake* C55, vide McCrindle, *The Invasion of India by Alexander the Great*, pp. 404-5. The exact nature of the matrimonial alliance is not known to us. Perhaps Seleucus married his daughter to either Chandragupta Maurya or his son.

5. McCrindle, *Ancient India as described by Megasthenes and Arrian*.

6. *Athenaeus*, 1.32, *Deipnosophists* 18 d-quoted by McCrindle: *The Invasion of India by Alexander the Great*, p. 405.

7. *Strabo*, II Fragment 29, p. 70.

philosopher, but received wine and figs only, as it was considered an insult for the Seleucid house to send a philosopher to a foreign country<sup>1</sup>.

The reign of Aśoka the great, son and successor of Bindusara, witnessed closer contacts with the Hellenistic world. The spread of Buddhism in some of the provinces of the Greek dominion helped in developing these contacts. In Rock Edict XIII<sup>2</sup> Aśoka speaks about his missionary activities in the kingdoms of the following Greek rulers: Antiyoka, Tulamaya, Maka, Antekin, and Alikasundara. They have been identified with the following Greek rulers in sequence: Antiochus II Theos of Syria (260—248 B.C.); Ptolemy II Philadelphus of Egypt (285—247 B.C.); Magas of Cyrene (c. 300—258 B.C.); Antigonus Gonatas of Macedonia (278—231 B.C.) and Alexander of Epirus (272-258 B.C.) or less probably that of Corinth (252-244 B.C.)<sup>3</sup>. The edict thus provides definite proof of close Indo-Greek contacts in the time of Aśoka. Aśoka also refers to his *Dhamma-Vijaya* in these Hellenistic kingdom<sup>4</sup>. According to the *Mahāvamsa*<sup>5</sup>, a Buddhist mission left for the country of Yonas in the time of Aśoka and monk Maharakhita gave a discourse on the *Kāla Karma Suttānta* to a gathering of people.

It is also on record that an embassy was dispatched by king Aśoka to the court of Antigonus Gonatas as the two had a similar philosophical outlook<sup>6</sup>. According to Polybius<sup>7</sup>, a Greek envoy, sent by Antiochus III (220—180 B.C.) visited the court of an Indian king, Salisuka, to negotiate on the maintenance of trade routes to India under Greek control. There is also a mention of the meeting between the two kings. The Greek king was received with royal honours and ceremony when he reached Kabul valley after crossing Hindukush<sup>8</sup>. Salisuka might have been another name of Subhagasesa<sup>9</sup>. According to Thomas, he must have been the grandson of Aśoka and son of Virasena, referred to by Taranatha as a son of Aśoka<sup>10</sup>.

1. *Athenaeus*, III, 444, XXIX 652-3, 67 citing Hegesander; Muller: *Frag. Hist. Greece* IV, 421; Rawlinson, *Intercourse Between India and the Western World*, 1916, p. 39.
2. Hultzsch, *CH*, Vol. I, p. 66, Bhandarkar, *Aśoka* (2nd. ed.), 1932.
3. Smith, *The Early History of India*, p. 193; Thapar, *Aśoka and the Decline of the Mauryans* p. 40.
4. Hultzsch, *CH*, Vol. I, p. 66; Sircar, *Select Inscriptions*, pp. 12-13.
5. *MHV*. XII. 1-8.
6. Saletore, *India's Diplomatic Relations with the West*, p. 161.
7. *Polybius* XI, 39.
8. Unvala, "Political and Cultural Relations Between Iran and India", *ABORI*, Vol. 28, 1947, p. 177; Mookerjee, *Ancient India*, p. 182; Jairazbhoy, *op. cit.*, p. 64.
9. Saletore, *India's Diplomatic Relations with West*, p. 168.
10. Thomas as quoted in Mookerji, *Ancient India*, p. 182.

Religious missions and diplomatic contacts and commercial intercourse brought in their train Hellenistic influence into India which left its mark on several aspects of Indian culture—religion<sup>1</sup>, philosophy, mythology, astronomy, etc.

During this period, a beginning in the exchange of ideas in the field of astronomy<sup>2</sup> and mathematics<sup>3</sup> had also taken place. It should not be surprising that the Babylonian and Greek astronomy drew the attention of the Indian scholars as the Hindu astronomy had drawn the attention of Greek and Babylonian scholars and physicians earlier<sup>4</sup>.

From Megasthenes we learn that in the Mauryan municipal administration there was a committee of five that looked-after the foreigners<sup>5</sup>. The deceased foreigners were buried with their own proper rites and ceremonies, and their estate were administered by Commissioners, who, at the earliest opportunity, transferred the assets to their heirs. A department somewhat similar to this existed in the Greek administration also. In the Greek set up, the members of the committee were called Proxenoi while in the Indian set-up, according to Megasthenes, they were called Astynomoi. This apparent similarity is noteworthy. Smith<sup>6</sup> felt that the Mauryas borrowed the concept of this unit from the Greeks, while the possibility that it was the natural outcome of a politico-cultural situation in which there was a regular influx of foreigners, cannot be ruled out.

Indian medical system was, for a long time, like the Greek medical system, related to religion and governed by priests<sup>7</sup>. Nearchos<sup>8</sup>, as reported by Arrian, informs us that Alexander had around him skilful Indians who were experts in health improving devices. These people used some special type of medicines to cure diseases and the Greeks were desirous of obtaining them. Arrian<sup>9</sup> says that Alexander's

1. Magasthenes, *Indica* Frag. XLVI; *Strabo* XV. 1-68. From the records of Greek Historians we learnt about Greek representations of Indian deities. Perhaps the Greek deities—Dionysius and Heracles were based on Siva and Krishna (Puri, "Indian Religion and Philosophy as known to Greek Historians", *PIHC*, Allahabad, 1938, 2nd session, p. 106). Indian religion is full of mythological stories of the fight of the gods with Asuras, their half brothers by the same father but a different mother. This can be compared with the fight between Olympian and Titans of the early Greek mythology, (Zimmer, *The Art of Indian Asia*, p. 95).
2. Kaye, "Hindu Astronomy", *MASI*, No. 18, 1924, p. 40; Basham, *The Wonder that was India*, p. 490.
3. Basham, *Ibid.*, pp. 495-496; Jairazbhoy, *op. cit.*, p. 76.
4. *Infra*, p. 205.
5. McCrindle, *op. cit.*, p. 87.
6. Smith, "Asoka: Notes", *J. Ant.*, Vol. 34, 1905, pp. 200-1; *The Early History of India*, p. 134.
7. Banerjee, *Hellenism in Ancient India*, p. 177; singhal, *India and World Civilization*, p. 177.
8. *Indika*. XV.
9. McCrindle, *op. cit.*, p. 223.

Army-Physicians did not know any cure for snake-bite, and also for several other seasonal diseases. Indian doctors were called in and some of them later accompanied the returning army, back to Greece. Megasthenes<sup>1</sup> tells us about certain diseases of elephants, and gives prescriptions for their cure which are wholly borrowed from *Hastyāyurveda* of Palakapya<sup>2</sup>. We have already stated that Chandragupta Maurya presented Seleucus among other things<sup>3</sup> some medicines also. Pliny states that Seleucid had planted some Indian medicinal plants, such as Amomum and Nardum<sup>4</sup> in their territory. In the second Rock Edict, Aśoka refers to the arrangements for providing medical treatment to men and animals in his country as well as in the neighbouring countries including the kingdom of a *Yona* king Antiyoka. The emperor was so kind that he got herbs, roots and fruits planted there<sup>5</sup>.

The Greeks were interested in Indian animals also. They showed considerable interest in Indian elephants<sup>6</sup>. Some Greek kings formed elephant division in their armies<sup>7</sup>. Seleucus despatched an Indian tiger to Athens<sup>8</sup>. Greek writers' interest shows that animals might have been quite an important item of export from India.

The close contacts between the Indians and the Greeks are also borne out by the Greek coins unearthed at several Indian sites. Early seleucid coins, bearing the name of Seleucus I and Antiochus I, have been discovered<sup>9</sup> in India. Some scholars believe that Greek kings issued them for their Indian territories<sup>10</sup>. The coins have Indian devices on them. The Indian elephant is depicted on the reverse side<sup>11</sup> of these coins. This device, according to some, commemorates the treaty of Seleucus I with Chandragupta Maurya<sup>12</sup>. There is a close resemblance between Seleucid coins and the coins of Sophytes<sup>13</sup>, and it seems that probably the latter were modelled after the former. In this connection reference may also be made to a bilingual Greek and Aramaic inscription of Aśoka found in Afghanistan<sup>14</sup>.

1. Majumdar, *A Concise History of India*, p. 259.
2. Fillozat, "Les Gaja Castras et le auteurs Greeks", *J.A.* 222, 164, 75, Paris 1933, quoted by *Ibid.*
3. Supra, p. 202.
4. Pliny, *N.H.* XVI, 135.
5. Hultsch, *CII*, II, p. 4.
6. *Frag*, *Diod* II, 36, p. 35; *ibid.*, (*Diod* II, 37) *Strabo*, XV, I, 42 & 43.
7. Thomas, *Story of the Cultural Empire*, p. 79.
8. Tran & Griffiths, *Hellenistic Civilization*, 1952, p. 307.
9. *Cambridge History of India*, pp. 390-91.
10. Adhya, *Early Indian Economics*, p. 107.
11. Rapson, *Indian Coins*, p. 4.
12. Sastri, *Age of the Nandas and Mauryas*, p. 129.
13. Rapson, *Indian Coin*, p. 4.
14. Umbertoscerro, "An Inscription of Aśoka discovered in Afghanistan the bilingual Greek Aramaic of Kandhara", *East and West*, Vol. 9, 1958, pp. 4-6.

According to Banerjee, the idea of composing episodes of romance in Greek countries might have gone from Indian romances<sup>1</sup>. On the other hand, the development of Indian drama and theatre is generally said to be based on greek drama and theatre<sup>2</sup>. This must have come in the wake of India's close contact with the Hellenic world. It has also been said that the widespread use of the term '*Yavanikā* (some sort of cloth prepared by the *Yavanas*)<sup>3</sup> for certain in Indian stage-plays, clearly shows that the practice of using a curtain on the stage came from the *Yavanas*, i.e. the Greeks<sup>4</sup>. S. K. Chatterji<sup>5</sup>, however, suggests that the term was derived from the Prakrit modification of the Sanskrit word '*yayanika*', i.e., to fix or to bind. No doubt, the origin of Indian drama cannot be traced to Greek drama, since the former has a long tradition, going back to pre-Mauryan period<sup>6</sup>. It is, however, possible that the matter of stage arrangment (*rangamancha*) certain elements were thought to be better suited to the actual performance of the plays and, therefore, adopted with profit. In this connection it may be mentioned that although curtain was not used in Greek plays, it was certainly in vogue in Greek time<sup>7</sup> and the possiblity remains that '*Yavanikā*' in use in Indians stage-plays was borrowed from the Greeks<sup>8</sup>. It appears that in antiquity, Indian had opportunities of seeing Greek plays and scene from Antigone is found depicted on locally made vase found near Peshawar<sup>9</sup>.

1. Banerjee, *Hellenism in Ancient India*, pp. 194-195.
2. *Ibid.*, p. 222; Singhal, *India and World Civilization*, pp. 57-58. Singhal denies that Indian drama was influenced by the Greek dramas. He has given several points of basic differences in approach and style.
3. Rapson, *Indian Drama in Encyclopaedia of Religion and Ethics*, Vol. IV, p. 885.
4. Weber, *ZDMG*, XIV, 1860, p. 269; *Ind. Stud.* III, p. 492.
5. Chatterji, *Indian Drama*, p. 8.
6. *Rigveda* X 95. There is in the *Rigveda* a remarkable series of dialogue hymns with a dramatic element such as the famous "Pururavas and Urvasi" hymn. Singhal, *India and World Civilization*, p. 58. Panini refers to acting in 5th B.C. and 4th B.C. Kautilya describes theatrical companies. Archaeological evidence can be taken as a supporting evidence. At the Sitabenga and Jogimara caves in the Ramagarh hills in Bihar, an inscription dating from 3rd cent. B.C. suggest the existence of dramatic art, and at Sitabenga cave, even a sort of crude stage seems to have been excavated in the rock.
7. Singhal, *op. cit.*, p. 57; Tarn, *Greeks in Bactria and India*, pp. 382-83.
8. Reich, *Der Mimus*, 1903 i, ii chap. VIII, p. 694, quoted by Tarn in *Greeks in Bactria and India*, pp. 382-83; According to Reich, Indian drama was influenced not by the Greek drama but by the Greek mime. It would seem that companies of mime actors did visit India. Perhaps the extent parody of the *Iphigeneia* in Tauris, in which the barbarian king is an Indian and talks pseudo Indian gibberish may bear on this. CP. oxy III, 413; quoted by Tarn in *Ibid.*, p. 383 the Papyrus is of second cent. A.D. but the piece itself is much older.
9. Singhal, *op. cit.*, p. 58.

## Śrī Laṅkā

After the intial colonization of Śrī Laṅkā (ceylon) by the people of Indian origin, India came into close contact with Śrī Laṅkā and there grew regular exchange of ideas between the two countries. Indo-Śrī Laṅkā relations during the Mauryan period moved around the major factors: the exchange of embassies and the propagation of Buddhism.

Even before the introduction of Buddhism in Śrī Laṅkā Aśoka had friendly relations with king Devānampiya Tissa<sup>1</sup>. *Mahāvaṁsa* makes it absolutely clear that Tissa himself was desirous of presenting some jewels to Aśoka and wanted to be friendly with him<sup>2</sup>. He sent an embassy to Aśoka with valuable gifts under the leadership of his nephew Arittha and a message in which he sought the Emperor's recognition of his Kingship<sup>3</sup>. The mission started from Jambukola by sea and reached Tamralipti in a week and took another week to arrive at Pataliputra<sup>4</sup>. The members of the mission were given great reception who after staying there for five weeks returned to Śrī Laṅkā with all the ceremonial gifts from Aśoka for the king's coronation<sup>5</sup>. On their retrun, Tissa according to the *Mahāvaṁsa Tika*<sup>6</sup>, was coronated a second time.

Several Indian religious cults were prevalent in Śrī Laṅkā in the time of Tissa. The Brāhmaṇas, Niganṭhas (Jain) and Paribbājakas seem to have been there in fair numbers. The *Mahābodhvaiṁsa*<sup>7</sup> refers to the construction of a 'devageha' for Brāhmaṇas in Tissa's time. Probably it was a temple. Three Jain monasteries, referred to earlier<sup>8</sup>, were in existence in the time of Tissa, as known from the same text<sup>9</sup>. This source also makes mentions of a monastery large enough to accommodate many Paribbājakas<sup>10</sup>. Though various Indian religious creeds were practised in Śrī Laṅkā, the introduction and rapid spread of Buddhism there in the middle of the 3rd century B. C. was the most memorable event in the history of Indo-Śrī Laṅkā,

1. In R.E. II & R.E. XII Aśoka refers to Ceylon as Tambapanni at two places; *Mhv.* XI, 16-19.  
 2. *Ibid.*, 18-19; cf. Desieva, "A Chapter in the history of Lanka", *Mahābodhi*, Vol. 50, 1942, p. 88.

3. *Mhv.* XI, 20-22; *Dipavaṁsa*, XI, 27-35.

4. *Ibid.*, XI, 23-24.

5. *Ibid.*, XI, 28-32; Ceremonial gifts included a fan, a diadem, Chains, a pitcher, yellow sandal-wood, garments, unguent, red coloured earth, water from the lake Anotapta and the Ganges and several other things.

6. *Mt.* pp. 305-306; *Mhv.* XI, 41.

7. *Mhv.* vp. 85.

8. See chapter VIII.

9. *Mhv.*, p. 84.

10. *Ibid.*, p. 85.

relations<sup>1</sup>. From the Thirteenth Rock Edict of Aśoka it is known that Dhamma missions had been sent to Śrī Laṅkā<sup>2</sup>, even before Mahendra's mission. Early Buddhist missions used Prakrit as the medium of giving sermons to the people of Śrī Laṅkā. In fact, a Prakrit inscription of Śrī Laṅkā, similar to Aśokan, Prakrit in language, is written in the Brāhmī script<sup>3</sup>.

After holding the Third Buddhist Council, Aśoka decided to send Buddhist missions to different countries for the propagation of Dhamma<sup>4</sup>. The *Dīparavīsa* testifies that Mahendra went to Śrī Laṅkā in the 20th year of Aśoka's reign (294 B.C.) after 236 year of *Parinirvāṇa*<sup>5</sup>. This mission left for Śrī Laṅkā under the leadership of Mahendra<sup>6</sup> who, according to Śrī Laṅkā tradition<sup>7</sup>, was Asoka's son, and according to the Indian tradition, his brother<sup>8</sup>. There is a controversy on the route taken by this mission. Simhalese chronicles<sup>9</sup> state that the mission flew like 'swan' from Vedisagiri to Ceylon<sup>10</sup>. However, according to the Indian tradition, its members went on foot via south India and founded many *Vihāras* there. Whatever the route, it did arrive in Śrī Laṅkā and got a good reception there from the king and his people<sup>11</sup>. Mahendra initiated the king into the mysteries of *Abhidhamma* in a gathering of 40,000 persons at Anuradhapur<sup>12</sup>. The king constructed a new monastery in the Mahavihara garden for the residence of the Indian monks<sup>13</sup>.

A second embassy was sent by king Tissa to India just after the arrival of Mahendra to enable Anula, his brother Mahanaga's wife, to embrace Buddhism<sup>14</sup>. A

1. Majumdar, "India and Ceylon", *Indo-Asian Culture*, Vol. 1, 1952-53, p. 20; Smith, *A History of Fine Arts in India and Ceylon*, p. 17.

2. Rhys David, *Buddhist India*, p. 135; Sen, "Aśoka's foreign policy", *PIHC*, Vol. XI, 1948, p. 79.

3. *Epigrap Zeylanica*, Vol. I, p. 139 ff. Ritiual Inscription quoted by Thapar, *Asoka and the Decline of the Manryas*, p. 134.

4. *Ibid.*, pp. 45-46; *Mhv*, XII, 1-8; Sastri (ed), *Age of the Nandas and Mauryas*, p. 216.

5. *Dipavāinsa*, XV, 70; Agrawala, "Embassies in Ancient India", *JUPHS*, Vol. XX, p. 10, Law, "Expansion of Buddhism in India and Abroadd", *NIA*, Vol. 2, 1940-41, p. 19.

6. *Mhv*, XII, 7-8; Mukherjee, *A History of Indian Civilization*, p. 202.

7. *Ibid.*; Agrawala, "Embassies in Ancient India", *JUPHS*, Vol. XX, p. 10; Elphiston & Cowell, *Ancient India*, p. 160.

8. Mitra, *India's Cultural Empire and Her Future*, p. 37.

9. *Mhv*, XIII, 18-20.

10. *Ibid.*

11. Thomas, *Story of the Cultural Empire of India*, pp. 89, 210.

12. *Ibid.*, p. 216; *Mhv*, XIV, 26: Sen, "Ancient India and East and South East Asia", *Indo-Asian Culture*, VII, No. 1, 1958, p. 72.

13. Thomas, *Story of the Cultural Empire of India*, p. 216; *Mhv*, XIV, 23.

14. *Mhv*, XV, 16-23.

Śrī Laṅkā mission, headed by Arittha, therefore, started for India to bring Sanghamitra<sup>1</sup> and a branch of the Bodhi tree. It is believed that two bas-reliefs on the eastern gateway of Sanchi depict this event. In the lower panel of the carving, the Bodhi tree is shown in the middle, with Aśoka's chapel rising half way up the tree. On both the sides of the Bodhi tree is to be seen a procession of musicians. On the right side Aśoka is getting down from his horse. In the upper relief is the branch of the Bodhi tree planted in a pot, and a big procession. On the left is depicted a city, which may either be Anuradhapur or Tāmralipti. On the lower bas-relief, on one side are peacocks, the dynastic symbol of the Mauryas, and the other side are lions, symbol of the royal family of Śrī Laṅkā<sup>2</sup>. This event is also supposed to have been depicted in an Ajanta mural<sup>3</sup>. The two depictions show the popularity and importance of this event after the lapse of considerable time. The mission came back with Sanghamitra<sup>4</sup>, the Mahendra's sister, and with a branch of Bodhi-tree and was given a warm reception. Accompanied with rituals the branch was planted at Anuradhapur, the capital of Śrī Laṅkā<sup>5</sup>. Another Buddhist text states that king Aśoka sent eight families of Kalinga to Śrī Laṅkā to look after the Bodhi tree and these people founded the *Thera* school of Buddhism<sup>6</sup>. Fa-hien has also attested to this memoirs<sup>7</sup>.

It is said that king Tissa sent yet another mission to India to bring the collar-bone and other bone-relics of the Buddha and that it returned with these relics and also the alms-bowl of the Buddha<sup>8</sup>. The collar-bone was kept in the Thuparama *dagaba*, which thus became the first *chaitya* to be built in Śrī Laṅkā<sup>9</sup>. Early Buddhist missionaries from India who left for Śrī Laṅkā also took Pali sacred-texts with them and these remained preserved there for ages<sup>10</sup>.

The title of 'Devānāmpiya' might have also been adopted by king Tissa through his enthusiasm for Aśoka<sup>11</sup>.

This regular exchange of missions also furthered commerical contacts between the two countries<sup>12</sup>. In the Mauryan period Indian traders were keen to obtain

1. *Mhv.*, XVIII, 1.
2. Rhys Davids, *Buddhist India*, p. 136; Thomas, *Story of the Cultural Empire of India*, p. 217; Mukerjee, *A History of Indian Civilization*, p. 202.
3. *Ibid.*
4. *Mhv.* XI, 18-42, XVIII, XIX, 65; *Dipavānsa*, XV 74-95, XVI, 1-7, 38-41. There was a rule in Buddhism that nun can only initiate a nun.
5. *Dipavānsa*, XV, 74-95, XVI, 1-7, 38-41 and XVII, 81-87, *Mhv*, XI, 18-42, XVIII and XIX, 61.
6. *Samanta Pasadika I*, 96; Cf. also; Sahu, "Cultural Relations of Kalinga with South India and Ceylon", *OHRJ*, Vol. III, No. 4, 1954-55, p. 183.
7. Giles, *Travels of Fa-hsien*, p. 68
8. Thomas, *Story of the Cultural Empire of India*, p. 217. *Mhv*, XVII, 9-21.
9. *Mhv.* XVII, 50.
10. Majumdar, "India and Ceylon", *Indo-Asian Culture*. Vol. I, 1952-53, p. 21.
11. Thapar, *Aśoka and the Decline of the Mauryas*, p. 136.
12. Thomas, *Story of the Cultural Empire of India*, p. 89.

pearls and other gems from Śrī Laṅkā<sup>1</sup>.

Devanampiya-Tissa established several monasteries besides the Māhavihara. The *Mahāvāriṣa* records that the abbey, where persons from noble families who entered the Order of monks lived, was called Issarasamanaka<sup>2</sup> (place of the noble monks) and the one where those who entered the Order from the Vaiśya cast lived, was designated Vessagiri<sup>3</sup> (mountain of Vaiśyas). He also built in Anuradhapura a public refactory called *Mahāpali* for the use of the Sangha<sup>4</sup>. He is also said to have built a vihāra at Tambukolapattana in Magadipe, and the well-known Tissamahāvihāra<sup>5</sup>.

Thus, we see that the religion and religious architecture of Śrī Laṅkā owe much to India. Indian missionaries achieved great success in spreading Buddhism in the island and were responsible for bringing together the people of the two countries much closer. Quite a number of people travelled either way and became familiar with each other's thought and ways of life. This intercourse also gave an impetus to the trade between the two countries.

### Central Asia

Central Asia has always been a melting pot of various cultures: Indian, Iranian, Hellenistic and Chinese. Available evidence pertaining to the protohistoric periods, has already been discussed in the previous chapters. By and large, this evidence is too sporadic and fragmentary to construct a continuous account of the history of Indo-Central Asian relations. But once we come to the threshold of the historical period, the entire perspective changes. The Mauryan period exposes Central Asia to India in a way which does not admit any significant legacy of the past. In a sense, it happened suddenly. It was the conquest of the Mauryas under Chandragupta which pushed forward the political boundary of India to the very border of Central Asia and very close to Balkh (Bactria), the main gateway to Central Asia. It has already been mentioned that Bactria and regions beyond Bactria, e.g., Parthia, Soghdiana and Khorezm, now in Soviet Central Asia, had come under the rule of the Achaemenids in 5th century B.C. and that this area came under the Greeks when Alexander conquered Iran in the last quarter of the 4th century B.C. Central Asia, however, also comprises regions east of the Pamir mountains, particularly the province known in Chinese as 'Sinkiang', traversed by the river Tarim and its tributaries like Khotan. The Greeks did not reach there and, therefore, Sinkiang, particularly

1. Mukerjee, *A History of Indian Civilization*, pp. 195-96 *Cambridge History of India*, Vol. I. p. 431; Mukerjee, *The Culture and Art of India*, p. 100.
2. *Mhv*, XX, 14-15.
3. *MT*. p. 407.
4. *Mhv*. XX, 23.
5. *Mhv*. XX, 25.

its southern region bordering the Himalayas, was exposed to India as a *tabula rasa*. There were two distinct zones in Central Asia, the western and eastern; the western having a long history and established traditions of the Achaemenids, Parthians, etc., while the eastern being still the abode of nomadic tribes. Thus, although practically the same media took the Indians to two areas of Central Asia—traders, missionaries, etc., yet the nature and form of Indo-Central Asian relationship differed in the two contexts.

The Mauryan period, it may be stated at the outset, only laid the foundations for the future close ties between India and Central Asia. As sometimes happens with the pioneer efforts, much of the evidence of this kind belonging to the formative period is either lost to us or still awaits discovery. Because of these difficulties, often help is necessarily sought from traditional accounts. Khotan, with its ancient capital at Yotkan in the immediate vicinity, is known in history for its great wealth and learning. The city lies on the river of the same name in eastern Central Asia (also known as Eastern Turkestan). According to tradition as also Kharoshthi documents<sup>1</sup> of the Khotan region, the city was known as Kustana, Khodana, and Khotan. According to the Tibetan sources<sup>2</sup>, it was known as Li-Yul or 'the country of Li'. Varying accounts are preserved in ancient literature about the growth of Khotan. Most of them support the theory of Indian colonization. Tibetan sources indicate that the principality of Khotan was founded by the joint efforts of the Indians and the Chinese<sup>3</sup>. Li-yul-lun-bstan<sup>4</sup>, a Tibetan source, refers to Li as a meeting place of the Indian and the Chinese but the language spoken there was quite different from Indian and Chinese languages. The customs and manners, however, were similar to those of Indians. It states further that a monk, called Vairochana, was credited with the introduction of Li language, which originally belonged to the Aryans. Tibetan annals<sup>5</sup> give a story connected with the founding of the principality of Khotan. They attribute it to a son of Aśoka. According to the story, a son was born to Aśoka when he was on a visit to the region with his queens. It was predicted by astrologers that the child would be the king before the death of his father. It was considered a bad omen for the king, and the child was left there. He was nourished at the breast of mother earth, so he came to be known as Ku-Stana (the breast of mother earth). He was eventually adopted by the Chinese king. On reaching manhood he quarrelled with the king and came to Khotan as the head of a small force. There he happened to meet Yasa, a minister of Aśoka, who had been exiled

1. Bagchi, *India and Central Asia*, p. 44.

2. Thomas, *Tibetan Literary Texts and Documents concerning Chinese Turkestan*, I, pp. 89-90.

3. *Ibid.*, p. 102.

4. *Ibid.*, pp. 102-105.

5. *Ibid.*, pp. 99-101.

by him. He also wanted to found a kingdom for himself here. First there was a clash between the two but later they came to an agreement and thus the kingdom of Khotan was founded in about 240 B.C. Kustana having been made king and Yasa minister, the Chinese followers of prince Kustana were established on the lower side of the Hu-then river and in the upper part of Mdole and Skam-sed. The Indian followers of the minister Yasa were established on the upper bank of the river (Shel-tchu gong-ma); and below Rgya and Kongdzeng between the two (Shel-tchu dbus) they settled the Indians and Chinese indiscriminately. Thus, it became a meeting place of the two peoples. Kustana's grandson was designated as 'Vijaya-sambhava' and all his successors bore the name beginning with Vijaya, for example—Vijaya-Vīrya, Vijya-jaya, Vijaya-dharma, Vijaya-Simha, Vijaya Kirti, Vijaya-Sangrāma<sup>1</sup>. These legends may have some element of historical truth in them.

According to Hiuen Tsang<sup>2</sup>, in ancient times Khotan was an uninhabited waste land. The god Vaiśravaṇa came to take up his abode there. The credit of making it into a settlement goes to the eldest son of Aśoka. He was blinded and sent to a desert region by his father in anger. When migrating men reached the western frontier of Khotan, they located him there and soon made him the chief with the title of kingship. On the eastern frontier, there was a Chinese king who was also in exile and who ruled there as a king. After sometime the two princes confronted each other as rival powers and a battle was fought in which the western king was defeated. But even after the victory he was always afraid of the other king. He had no son to succeed him. He went to the temple of Vaiśravaṇa and prayed for a son and his prayer was granted. The child was nourished at the breast of mother earth, so his name was Ku-staṇa. Arriving at adult age he shed glory on his ancestors by his wisdom and courage. The same story with a slight variation is to be found in Buddhist works<sup>3</sup>. It is also significant to note that according to the *Annals of the Han Dynasties*, Kashgar had been occupied by a population of Indian speech and culture before the second century B.C.

The colonization of Khotan seems to have gone side by side with the spread of Buddhism, the evidence for which can be gathered from various sources. Thus, on the wall of the gate of Chü-yung-Kuan, a town on the road from Peking to Kalgan, there is an inscription in six languages<sup>4</sup>—Sanskrit, Tibetan, Hsi-hsia, Uigur,

1. Thomas, *Tibetan Literary Texts and Documents concerning Chinese Turkestan*, pp. 104-130.

2. Beal, *Buddhist Record of the Western World*, Vol. II, pp. 309-312.

3. Bagchi, *India and China*, p. 13; Thomas, *Story of the Cultural Empire*, p. 91; Majumdar, *The Age of Imperial Unity*, p. 640; Another Buddhist tradition connects this problem to Prince Kunāla, Aśoka's son. It is suggested that he was the governor of Taxila and had a problem with his step mother. Due to her evil activities he was blinded and left for Khotan. He colonised the place and laid the foundation of kingdom and kingship both.

4. Stein, *Ancient Khotan*, p. 49.

Mongol and Chinese running down from the time of Yuan dynasty. Part of it runs: "the great and illustrious *Chakravartin* king Aśoka, having assembled the relics of Lord Buddha of great virtue, adorned beautifully the vast world with stupas, and made the great Dharma shine greatly throughout the world". It may be recalled that the propagation of Buddhism beyond the boundaries of India proper is considered to have begun with the Council of Pataliputra convened in 245 B.C. by Aśoka, and Kashmir and Gandhra were, in fact, converted by Madhyantika and his companions<sup>1</sup>. The newly discovered inscription of Kandhara<sup>2</sup>, dated in 258 B.C., tells us in Greek and Aramaic that as a result of Aśoka's activity, "everything prospers over the whole earth<sup>3</sup>". According to some Chinese sources<sup>4</sup>, Sramanas from the Yueh Chi, in Central Asia, arrived at Hien-yang as early as 217 B.C. bringing Buddhist Sutras. The further progress of Buddhism to the north is borne out by a Kharoshthī inscription on a clay object found at Begram in layer I (3rd-2nd century B.C.). J. Harmatta reads a Buddhist name in it<sup>5</sup>. In this connection an interesting reference may also be quoted according to which, the history of Buddhism in Central Asia is usually dated from the time of the Graeco-Bactrian State, although the knowledge of the teachings of the Buddha and perhaps some Buddhist adopts may have found their way here much earlier in the Achaemenian area<sup>6</sup>.

Whatever the credibility of these accounts, traditional or otherwise, one thing appears to be certain that Buddhism had reached Central Asia, both eastern and western, during the time of Aśoka or his immediate successors. As often happens,

1. Lamotte, E., *Histoire du Bouddhisme Indien*, Louvain 1958, quoted by Pentti Aalto, *ICWTC*, p. 249.
2. Umbertoserrto, "An Inscription of Aśoka discovered in Afghanistan the bilingual Greek", *East and West*, Vol. 9, pp. 4-6.
3. Pentti Aalto, "On the Role of Central Asia in the Spread of Indian Cultural Influence", *ICWTC*, p. 260—"Aśokaś who had started this enormous expansion of Dharma, himself became a legend. This legend, the *Aśokavadana*, was translated into Chinese around 300 A.D. by the Parthian born translator Fa-Kin working at Lo-Yang, and the work soon became very popular in China. In the Tonyukuk epitaph (near the present capital of Mongolia) the Sogdians are mentioned with Aśoqa as Chief. The Śakas of Khotan used Aśauka as personal name, and the Turkic name Asuq is obviously also to be connected with that of the great Indian Emperor. The Prince of the Voguls living in Northern Siberia between the Urals and the lower course of the Ob bears the name Asyka, in the Russian chronicles and in their epic folk songs the Voguls even today call him OSX: the name of "the Beloved of the Gods" in immortal even among the farthest flung peoples of the inhabited world".
4. Pentti Aalto, "On the Role of Central Asia in the Spread of Indian Cultural Influence", *ICWTC*, p. 250.
5. J. Harmatta, *Sino Indica*, Vol. XII, No. 1-2, Budapest, 1964, p. 4, quoted by B.A. Litvinsky, "India and Soviet Central Asia", *ICWTC*, p. 264.
6. Litvinsky, "India and Soviet Central Asia", *ICWTC*, p. 264. A similar view was expressed earlier with respect to Iran. See Herzfeld, *Zoroaster and His World*, Vol. II, (Princeton, 1947), p. 629.

traditional accounts of an episode originating in different countries give details which are not always the same but which relate to one and the same episode. Take for example the Tibetan Annals and Hiuen-Tsang's account. According to Hiuen-Tsang, Arhat Vairochana coming from Kashmir introduced Buddhism in Central Asia in the time of Vijaya Samabhava. The king is supposed to have built a monastery for him at Tsar-ma. According to some Tibetan sources, on the other hand, Vairochana actually brought miraculously the relics of Buddha from Kashmir to Central Asia in 211 B.C.

The above details show that while the spread of Buddhism in eastern Central Asia was closely related to the colonization of the land by the people of Indian origin, in western Central Asia it was quite independent of such socio-political development. It is difficult to trace with any degree of certainty the routes taken by the Indian colonizers and missionaries. It appears that the casual routes passing through the high mountain passes became somewhat regular caravan routes, and the first stone of the great Silk Route of the later period was laid in the Mauryan period itself. What were the items of export and import cannot precisely be determined but indirect evidence shows that pearls, diamonds, gems, sandal-wood, etc. were exported from India to Central Asia, while hides and skins were imported to India from Central Asia<sup>1</sup>.

### **China**

India and China are the two neighbouring countries which have been separated by the insurmountable wall of the Himalayas. Nonetheless, people of the two countries managed to establish contacts with each other right from the Old Stone Age. Movius was the first scholar to show that the chopper-chopping tool complex of the Himalayan region goes with the Chinese and South-East Asian complex of the Old Stone Age culture. During the Neolithic period there appears to have been still closer contacts with China. The neolithic pit-dwellers of Kashmir seem to have borrowed not only the mode of living but also stone tools such as the rectangular harvesters with two holes. We have no definite proof for such contacts during the succeeding Bronze Age<sup>2</sup>.

There is, however, some circumstantial evidence to show that India and China maintained commercial contacts in the fifth century B.C. The Achaemenid empire was at its zenith and it included not only Soghdiana and Bactria but also Punjab<sup>3</sup>. These Persian overlords are credited with sending merchants to the Eastern Countries.

1. Rapson (ed.), *Cambridge History of India*, Vol. I, p. 431.

2. Gupta, "Prehistoric Indian Cultures in Soviet Central Asia", *ICWTC*, pp. 239-248.

3. Ghosh, "Origin and Antiquity of the Sanskrit word Cina as the name of China", *ABORI*, Vol. 42, p. 153; In that period Persians were responsible for establishing peace and security all over the western world.

These merchant-groups, in all likelihood, consisted of several Indians<sup>1</sup>. Another evidence of the same nature also throws some light on Sino-Indian relations in the Pre-Mauryan Period. Henri Maspero has quoted several references to show that the Chinese had a map which represented the earth as surrounded by four seas, and with designs figuring gods, strange people and monsters who were regarded as the real residents of the earth<sup>2</sup>. This has been now lost but some portions of it are still preserved in old works. This representation has elements of Indian folklore combined with Chinese legends<sup>3</sup>. One of these legends depicts the earth as made of seven continents each in the form of great isle, surrounded by water and placed around the great central mountain called Meru. Further, India and China have been shown as two different but neighbouring continents. Now, it is well known to scholars<sup>4</sup> that the concept of seven continents is Indian and was, in all likelihood, borrowed by the Chinese and incorporated in their legends.

'China' appears to have been derived from the word 'Cīna'<sup>5</sup> which occurs in the *Mahābhārata*<sup>6</sup> and *Arthaśāstra*<sup>7</sup>, a fact that indicates that the knowledge of China on the part of the Indians certainly goes back to the fourth century B.C., if not earlier. How this term came to be used in India is not very clear. Laufer believes<sup>8</sup> that it came through the sea route while Pelliot feels<sup>9</sup> that it came by the land-route through Burma, and that too only in the second half of the 3rd century B.C.

It is interesting to note that Pankou<sup>10</sup>, the Chinese traveller, has recorded the

1. Ghosh, *op. cit.*
2. Henri Maspero, *La Chine Antique*, pp. 508-509 quoted by Ghosh, "Origin and Antiquity of the Sanskrit word 'Cīna' as the name of China", *ABORI*, Vol. 42, 1963, p. 152; The conception of earth surrounded by four seas was very old and was of Indian origin.
3. *Ibid.*
4. *Ibid.*
5. Dikshitar, "Southern India and China", *SIS*, Vol. II, 1946, p. 159; Pusalker, *op. cit.*, p. 157; Sircar "Entry of Buddhism" *Mahabodhi*, Vol. 50, 1942, p. 189; Sastri, "The beginning of Intercourse Between India and China", *IHQ* Vol. 14, p. 380; According to Paul Pelliot and Father Martini, this word is derived from Tsin dynasty (240-207 B.C.). If we accept this derivation, the literary evidence would not take us beyond 3rd century B.C. Paul Pelliot, "Deux Itinéraires de Chine en l'entre-à la fin du VIII Siecle": *BEFFO* Vol. IV, p. 143, quoted by Ghosh "Origin and Antiquity of the Sanskrit word 'Cīna' as the name of China", *ABORI*, Vol. 42, 1963, p. 153.
6. *Mahābhārata*, *Sabhāparva*, 26, 9.
7. *Arthaśāstra*, 2, 11, 114.—*Kauseyam Cīnapaṭṭasca cīnubhūmija.*
8. Laufer, quoted by Sastri, "The Beginning of Intercourse Between India and China", *IHQ*, Vol. 14, pp. 380-87.
9. Pelliot, quoted in *Ibid.*
10. Panikkar, *India and China*, p. 18; Dikshitar, "Southern India and China", *SIS*, Vol. II, 1946, p. 160.

visits of the Chinese traders to Kanchipuram in the second century B.C. On their return to China, they have been credited with bringing pearls, glass and semi-precious stones in exchange of silk and gold. Incidentally the *Arthaśāstra*<sup>1</sup> also mentions this trade in silk. Pankou<sup>2</sup> goes a little further and talks about a special Chinese expedition despatched to India for the exploration of the Indian ocean. One may, therefore, attribute the influence of Indian elements in the two early Chinese works —Mutientsu Chuan and Erhya of the fourth or third century B.C.<sup>3</sup> (they may be of a still earlier date), to the trade relations of which Pankou has written so specifically. According to Goodrich<sup>4</sup>, the Chinese language used the Sanskrit word for lion. These sporadic evidences certainly point to Sino-Indian relationship.

There is a good deal of controversy regarding the exact date of the introduction of Buddhism in China and also how it was introduced there. According to some scholars, it was an event of the post-Mauryan period, while some are of the opinion that it was introduced there in the Mauryan period. Indian sources are silent on this. According to Chinese legends, however, Buddhism was introduced in China in 218 B.C. by Buddhist missionaries<sup>5</sup>. *Li Tai San Paschi*<sup>6</sup>, a Chinese Record, informs us that Che-li-fang and seventeen monks reached China in the time of Che-Houang Ti (246—209 B.C.) of Ts'in dynasty and visited his court. At first the king ordered that they be put in a prison but they were released when they showed some miracles and were allowed to preach their religion. Since these missionaries faced some difficulty in preaching their Faith because they could not express themselves in the Chinese language and the Chinese people could not understand their language<sup>7</sup>, a distinct emphasis was laid on the translation of Buddhist scriptures<sup>8</sup>. Chinese missions came to India to collect the texts and Indian monks went to China to render help in their translation<sup>9</sup>. Amongst other evidences connected with the introduction of Buddhism in China, mention may be made of the traditional eighty-four thousand stupas built by Aśoka, some of which are said to have been discovered in China<sup>10</sup>. One of these yielded relic bones (presumably of the Buddha). This

1. *Arthaśāstra* II, 11, 114; *Kausayam Cīnapaṭṭasca Cīnabhūmija*.

2. Dikshitar, "Southern India and China", *SIS*, Vol. II, 1940, p. 160.

3. Mukerjee, *The Culture and Art of India*, p. 102.

4. Goodrich, *A Short History of the Chinese People*, p. 28.

5. Pusalker, *op. cit.*, p. 159; Bagchi, "India and China" in *Greater India*, 1960, p. 194; Law, "Expansion of Buddhism in India and Abroad", *NIA*, Vol. 2, 1939-40, p. 705; Dikshitar, "Southern India and China", *SIS*, Vol. II, p. 157.

6. Zurcher, *The Buddhist Conquest of China* (Text), p. 20; Singhal, *India and World Civilization*, p. 302-303.

7. Kamata, "Cultural Exchange Between India, China and Japan", *ICWTC*, p. 315.

8. *Ibid.*

9. Singhal, *India and World Civilization*, p. 303.

belief may not be absolutely correct but it does indicate an active intercourse of ideas and rituals between the two peoples.

Buddhism seems to have reached China mainly through Central Asia<sup>1</sup>. Aśokan inscriptions bear witness to the fact that Buddhist missionaries took an active interest in propagating the faith in Central Asia<sup>2</sup>. Che-Houang Ti was a contemporary of Aśoka and he established contacts with Khotan, a very important Indian colony, in Central Asia<sup>3</sup>. Thus it seems that the route to China lying through Khotan was in regular use. Buddhist missionaries are likely to have followed one more route through Assam or Burma<sup>4</sup>. Besides these missionaries who used the land route, traders and voyagers from south India took the sea route to reach China<sup>5</sup>, probably at a later date.

Buddhism reached China in the wake of new commercial intercourse between the two countries. In the Mauryan period was laid the foundation for the coming together of the two countries culturally; the edifice was built later on, in the early centuries of the Christian era. Trade, and missionary activities of the Buddhists were the two main tools with which the ultimate success in cementing relations between India and China was achieved.

To summarise, it is obvious that it is not without reason that historians have regarded the Mauryan period as a turning point in Indian history. For the first time, it becomes possible to cross-check the historicity of different traditional personage and events with several indigenous and foreign accounts about them. As we now know, the Mauryan kings not only unified practically the whole of India under one political rule, they also extended the western frontiers of their empire to the eastern borders of Iran. Similarly, the Macedonian Greeks, under Alexander, conquered country after country, knocked at the gates of India, and Hellenized practically the whole of West Asia. The geographical proximity brought the two great political powers representing two equally great civilizations of the world—the Indian, and the Greek, as modified by Assyrian, Mesopotamian, Persian and Central Asian elements—face to face; sometimes ready to strike each other and sometimes ready to accommodate each other. Eventually, they accepted each other with great understanding, and cooperated in different fields of learning. The coming together of these two great cultures produced new forms in art and polity. Exchange of embassies with Egypt and other distant countries is an unimpeachable proof of India's desire to maintain close contacts with the outside world. The accounts of Megasthenese provide an eloquent testimony to India's intimate relations with West Asian

1. Kamata, *op. cit.*, p. 315; Sarkar, "Buddhist Contact of China", *ICWTC*, p. 325.

2. Sarkar, "Buddhist Contact of China", *ICWTC*, p. 326.

3. Sircar, "Entry of Buddhism", *Mahabodhi*, Vol. 50, 1942, p. 189.

4. Dikshitar, "Southern India and China", *SIS*, Vol. II, 1946, pp. 157-59.

5. It is said that China had no navy of its own before its contacts with India.

countries. And the arrangements made by Kauṭilya to receive foreign visitors and regulate their movement in the country can hardly be explained in any other context.

India's cultural relations with neighbouring countries were still more important. The sending of missionaries to other countries, including the one to Śri Laṅkā under the leadership of Aśoka's own son and daughter, was the direct outcome of an intense desire on the part of the great Mauryan king to extend his 'cultural empire' much beyond his political empire. The high regard that king Mahatissa of Śri Laṅkā voluntarily showed to Aśoka proves the success of the new policy.

The political and cultural contacts thus achieved results in opening regular land and sea routes which gave trade relations between India and distant countries a new fillip. The famous Silk Roads connecting China with Egypt, and passing through and/or touching a dozen countries of the Orient, appear to have been opened in the Mauryan period. It appears that during this period India and China also discovered safe routes through the eastern seas, paving the way for closer ties in the succeeding period.

## EPILOGUE

Writing in 1969, L.S.B. Leakey, the doyen of physical anthropologists, observed in *Unveiling Man's Origins*, that Charles Darwin's prophecy is coming true. More and more evidence is accumulating which points to the African continent, and particularly the East/Central African region, as the cradle of the family Hominidae, to which all mankind living and extinct, belongs. According to him, it is likely that 'the descendants of the East African *Kenyapithecus* branch of the Hominidae alone evolved into the genus *Homo*, as represented both by *Homo habilis* and *Homo erectus*'. 'If so', he however puts it like that, 'then it would seem that, a *Homo erectus* branch moved slowly out of Africa and into the Far East, in the Middle Pleistocene', and gave birth to 'Peking Man and Java Man', and possibly the Indian Man whose bones have so far not been found.

This is the present position of the result of researches conducted by prehistorians and anthropologists during the last hundred years. The time span that this story covers is between 1.75 million years (the earliest K/A date of Bed I of Olduvai Gorge, formed during the Early Pleistocene period in Tanzania, from where the oldest skeletal remains of *Homo habilis* have come) and .5 or slightly more million years from now (the date of the Middle Pleistocene period to which most of the Asian examples of the Old Stone Age man and tool belong).

There is, however, another view also which may be mentioned. In the Siwalik Hills of northern India remains of two important but cognate branches or genus of Homonidae were discovered in 1936 by G. Edward Lewis of Yale University—the *Ramapithecus* and *Sivapithecus*—in the Upper Miocene deposits. Is it then not possible that it is this branch of the homonid family 'which eventually evolved' into the Asiatic *Homo erectus*? May be, these forms—the Peking Man and Java Man—were the results of some sort of evolution in Asia, parallel to the development in Africa of *Homo habilis* as well as the African variety of *Homo erectus*.

Archaeologically speaking, the earliest assemblage of stone tools (chopper-chopping complex) found in Asia goes back only to the Middle Pleistocene period; a few pre-Soan flakes coming from the Boulder Conglomerate Zone of the Second Glacial period of the Soan have been rejected as accidental flakes by K.P. Oakley, although recently Sankalia claims to have discovered thick-flake tools from the deposits of the First Interglacial period (of the Lower Pleistocene age) at Pahalgam

in the Kashmir valley, but let us wait for more discoveries of this kind. In this connection an observation is worth recording: the chopper-chopping tools of the Soan assemblage of northern India are more akin to the chopper-chopping tools of the Oldowan assemblage of east Africa, than with the chopper-chopping tools of China, Malaya, Java and Burma. It is just possible that India had close contacts with Africa during the Old Stone Age, and northern India was colonized by the Africans of the Bed II of the Olduvai Gorge, who had also evolved handaxes and cleavers, since these tools are also found in the sub-Himalayan zone.

In southern India, handaxe-cleaver complex is universally found. It is also of Bed II (and also Bed III) variety. Sankalia and others postulate that it came to India via Gujarat, may be through some land bridges which came up in the wake of Glacial periods when the sea-level is likely to have gone down considerably although geological evidence of this postulate has still to be worked out, in fact it is very much doubted.

What about India and East and South-East Asia during the Old Stone Age ?

Movius was the first author to include northern India in the South-East Asian zone of chopper-chopping complex. In a recently reproduced map, Sankalia has suggested that in spite of certain differences in tool typology, it is fairly certain, in view of the overall similarity in culture-complexes, that East and South-East Asia received its culture from India.

If the above quoted views are correct, it is easy to visualize a situation in the Old Stone Age in which India had contacts both with Africa and East and South-East Asia.

Recent researches conducted by Gupta have also shown that Soviet Central Asia might have owed its chopper-chopping tools to India.

The picture is not clear even this much the moment we start considering the Middle Stone Age of India. The flake and flake-blade tools have a greater affinity with the similar tools of the Old Stone Age assemblage of India than the Middle Palaeolithic industries of Europe. However, as Sankalia has pointed out, at least a small percentage of these tools are similar to the Mousterian of the Levalloisian tradition about which Borde has written in details. Since these tools have greater affinity with the tools from the Sanghao Cave (Fig. 7b) of the Middle Stone Age of Pakistan and, Afghanistan and Central Asia, it is possible that these Asian countries were in contact with each other on the one hand, and West Asia (Mousterian) on the other.

The Upper Palaeolithic in India is coming to light only recently and we are still not sure of its chronological horizon. What we know is only this much that there are certain assemblages in Andhra Pradesh (Distt. Chittoor) and Uttar Pradesh (R. Soan and Belan basins) which contain blade tools, such as burins, backed blades and points. Although, they do resemble a few tool-types of the Upper Palaeolithic.

colithic Europe, they are not identical with any of the known European assemblage. It has often been suggested that the Upper Palaeolithic assemblages are the local developments and they exhibit considerable variation. Obviously, at the present state of our knowledge, it is difficult to say if there was any effective contact between India and Europe during this period.

The Mesolithic is the logical outcome of the Upper Palaeolithic; the tools were still made on blades, although they became smaller in size and they evolved new types, such as the triangle and trapeze. Indian microliths owe their appearance probably to the West Asian (Palestinian, Iranian and Central Asian) assemblages and technical know-how. In all likelihood, the tradition started in the Mt. Carmel sites, and later on travelled to the east.

As far as the Indian Neolithic assemblages are concerned we have to consider them in the regional framework so that a correct picture of their contacts with our assemblages may emerge. Thus, the north-eastern types of polished stone tools, such as the shouldered axes and adzes with rectangular cross-section, show clear influence of the Chinese and South-East Asian types. Similarly, the northern types from the Kashmir Valley, such as the rectangular harversers with two perforations, show influences coming from Central China. There is some possibility of Burnished Grey Ware, often found along with the neolithic tools in south India, coming from West Asia, although more detailed field-work is necessary in regions between Iran and India to establish or reject this proposition. However, the discovery of a number of neolithic sites in Baluchistan and the sub-Himalayan region, such as Shadipur, Sarai-Khola and Ror, clearly indicates India's contacts with West Asia.

Once we leave behind the Stone Age cultures, the evidence of India's cultural contacts with the ancient world becomes more firm. There are a large number of sites in Baluchistan and lower Sind where people started living in village like sedentary settlements. Most of them, as their pottery, stone and shell objects, copper tools, mode of burials, etc., show, came in groups from northern and eastern Iran and also Soviet Central Asia, and assimilated the local cultures, some of which were of the mesolithic variety, e.g., at Kile-Ghul Muhammod it was pre-Pottery Neolithic complex. The most helpful evidence comes from pottery designs as well as from certain pot-forms. From now onwards our reliance increases on pottery, which is considered the ABC of archaeology.

As we proceed in time and reach the stage of the Harappan and Pre-Harappan cultures, our evidence multiplies in the form of seals and sealings, written documents, monumental structures, stone vases, boxes, beads, statues, gamesmen, and weights, terracotta figurines, houses and town-planning, etc. We are now on absolutely sure grounds that India entered into commercial contacts with Mesopotamia, and to a restricted degree with Afghanistan, Soviet Central Asia and

northern and southern parts of Iran. From the archaeological evidence it is clear that exports from India accounted far greater quantity than the imports. If the identification of Meluhha of the Akkadian Cuneiform inscriptions with Gujarat or Sind of the Harappan times is correct, as many serious scholars have suggested, then the quantum of export from India through the sea route was very high. Similarly, exchange of goods through the southern route, passing through Tepe Yahya in Iran (Pl.Xa), and the northern route, touching Altin Depe in South Turkminia, may have been undertaken<sup>1</sup>. Harappan antiquities in cluster have been found as far off places as Tell Asmar in the Diyala region of Mesopotamia. According to a cuneiform inscription, Meluhhans had a colony in Kish, an information that throws fresh light on the problem of the nature of trade relations between India and West Asia. Indian influence on Persian Gulf seals in the field of motifs like bull, and also the adoption of Harappan letters by the Gulf traders, is now well known. It appears that at the base of India's cultural contacts with other countries during this period lies the strong ties of a net-work of commercial contacts.

After the Harappan complex, the cultural matrix of India suddenly changes from its urban frame-work to rural frame-work. Not that during the Harappa period all the sites or even majority of the sites were urban centres, contrary to it, out of the two hundred sites now known hardly twenty appear to be urban settlements, the rest being villages of different dimensions, but the benefit of the urban centres were shared directly or indirectly by a large number of satellite villages which must have, in their own turn, contributed men and material to the growth and sustenance of these urban centres. Thus, during the post-Harappan Neolithic-Chalcolithic period, on the one hand the old urban centres declined to small settlements of shanty houses built without any planning, and on the other new villages grew up with an entirely new pattern of living and, cultural and commercial contacts with other peoples. The archaeological evidence collected during the last two decades in India suggested that while India's commercial contacts with Mesopotamia came almost to a grinding halt, India's cultural contacts with Iran grew closer, although much more work is needed in the intervening regions to establish the route through which the contacts were established. At present, contacts made by channel-spouted bowls, bowls on solid stands, pots with tubular spouts, decorated beads of clay terracotta, mother goddess figurines, double-pot burials, etc., unearthed in archaeological excavations at sites like Ahar, Navdatoli, Nevasa, Inamgaon and Chandoli, largely located in Maharashtra, Madhya Pradesh and Rajasthan. Some evidence of an indirect kind in favour of Indo-Iranian contacts, as visualized by Prof. Sankalia in his various articles, monographs and excavation reports, is coming from the Gandhara region in the Swat Valley. At sites like Katelai, Saidu Sharif and Loebanr bowls on stand in grey and red wares

1. Recently, a pot-sherd with impression from a Harappan seal was found at Tepe Yahya. EW, N. S., Vol. 23 (1973) Fig. 137

have been found and they are all dated to the period between 1500 B.C. and 900 B.C., largely coeval with the chalcolithic cultures of western India. But it is not sufficient; a picture is definitely emerging but the details are still to be filled in with antiquities which were definitely contemporary with the Indian antiquities.

By about 1000—800 B.C. India enters into the Iron Age. In south India innumerable megalithic burial monuments are built by pastoral-cum-agricultural communities which seem to have come into close contacts with the megalith builders of West Asia, particularly Palestine and southern Arabia. The opinion of most of the scholars favours sea-route for the incoming of the megalith builders, although land-routes have still not lost all ground; Allchin, Leshnik and Banerjee still visualize a situation in which land routes from West Asia, Central Asia and Baluchistan played an important role. The discovery of Swat Valley graves also suggests the same since the stone-circles and stone-cists which the people built have strong similarities with the megalithic monuments discovered in south India. May be, in the make-up of the megalithic tradition in India, both the sea-route and the land-route played equally important roles. But guesses are more than certainties, and future work, it is hoped, would clarify many problems connected with the origin of megalithic tradition in India.

While all this was happening in peninsular India, the Indo-Gangetic valley witnessed the rise of the Copper Hoard people, the Vedic Aryans, the Mahajana-padas, the Buddha and Mahavira, and also the fall of the Punjab in the hands of the Persian invaders in successive order.

The Aryans have always troubled the historians and archaeologists; only linguists have been content. The historians have been troubled because there is hardly any internal evidence in the Vedic texts to fix their original home outside the boundaries of ancient India; they cannot be placed beyond the Hindukush. The archaeologists are troubled because at present there is no material evidence from any of the excavations and explorations conducted by them in India or outside which may directly be associated with the Aryans in India, whether they are identified with the Painted Grey Ware people or Gandhara Grave people or the Banasians or even the Copper Hoard people. Thapar has analysed all these theories in one of his classic papers published in *India's Contribution to World Thought and Culture*. Linguists are content because they have been able to show that the Vedic language and Vedic gods appear in the Boghaz-Küi (in Turkey) inscription of 1360 B.C. and in *Aresia* of the Persians dated variously between 1500 and 600 B.C. Obviously, while it is true that linguistic and inscriptional evidence is an unimpeachable evidence in favour of India's contacts with Turkey, Iran and Central Asia in the second millennium B.C., we have to corroborate it with archaeological and anthropological evidence in order to arrive at sound conclusions. It requires more field-work.

The Indian Copper Hoards form an entity by itself. Lal has conclusively shown that it is completely indigenous in origin. He has separated Fort Munro Sword, Trunian Celt, Adze-axe from Shahi Tump, etc. made of bronze, from the Indian mainland tools made of copper. Sankalia has, however, recently shown in an article published in *Puratattva* No. 7, that the spouted and handled pots of Ochre Coloured Pottery found at Saipai show features which are Iranian in origin; they have no precedence in India. Discussions are still going on on this issue; we have to wait and watch the results of future field work.

The Early Historical Period begins with the rise of the sixteen mahājanapadas in the 7th cent. B.C. and ends with the rise of the Mauryan empire in the 4th cent. B.C. The period witnessed a major event in the history of India : the Achaemenid Empire of Persia annexed a large portion of Indian mainland on her western frontier—from western Baluchistan to eastern Punjab. It had a solitary effect on the Indo-Persian relations: it opened new possibilities for the movement of peoples and ideas not only between the two contending countries but also beyond Persia, as far as India's contacts with the outside world was concerned. The archaeological and literary evidence in favour of Persian influence on Indian religion, polity and court mannerism needs no recapitulation, the only point that has to be made here is that although the Persian rule over India was short-lived and the Persian influences did not alter the directional changes in the cultural growth of the country, still a new process—political as well as cultural—in the field of India's contacts with West Asia got initiated whose culmination was witnessed in the succeeding Mauryan period.

The Mauryan Period is rightly considered as the turning point in the history of India's contacts with other countries. A strong political empire whose boundaries included the whole of Baluchistan and Afghanistan and parts of Iran was certainly capable of initiating the policy of ambassadorial exchanges with the kingdoms in the far off regions. Similarly, the invasion of Alexander and the exploration of the Sind led to the re-opening of the main routes and arterial roads connecting India with countries lying as far off as the Mediterranean coast. But, besides these political by-products of the Greco-Indian military conflicts, the national policy of a new kind that Aśoka initiated brought great laurels to India and created an atmosphere in Asia in which India could maintain very close contacts with several countries. This was the policy of Dharma Vijaya. Aśoka created a band of devoted workers in the pay-rolls of the king—the Dharma Mahāmātras. They were then sent to Central Asia, Śri Laṅkā, West Asia and Egypt to propagate the message of the Buddha. Following them, the merchants travelled to these countries. And following them, several groups of people migrated to these countries. It is absolutely clear that the phenomenal progress in the process of colonization of Central Asia and Śri Laṅkā started during this period.

One of the lessons of the history outlined here is that although the contact between one country and the other might start in any sphere—*political*, commercial, religious or some other—yet in the long run it leads to the cultural contacts of wider dimensions and deeper roots. The cultural history of India speaks volumes in favour of this deduction. What we have been able to show here is that now no one should hatch the age old view that the history of India's contact with other countries started only from the times of the Persian invasion or the invasion of Alexander, it has a still longer past, going back to several lakhs of years, during the Palaeolithic period.

## BIBLIOGRAPHY

### BOOKS AND MONOGRAPHS

- Adhya, G. L.  
Agrawal, D. P.  
Agrawal, D. P. and  
Kusumgar, S.  
Agrawal, V. S.  
Allchin, F. R.  
—  
Allchin, B. & Allchin,  
F. R.  
Arne, T. J.  
Bagchi, P. C.  
—  
Balsara, P. P.  
Banerjee, G. N.  
Banerjee, N. R.  
Bapat, P. V. (ed.)  
Barthold, V. V.  
Basham, A. L.  
Bhandarkar, D. R.  
Bowen, R. L.  
Braidwood, R. J. &  
Howe, B.,  
Brown, C.  
Buddha Prakash  
Caldwell, R.  
Cook, S. A., Adcock,  
F. E., Charlesworth,  
M. P.  
Carleton, P.  
Casal, J. M.
- Early Indian Economics* (New Delhi, 1966).  
*The Copper-Bronze Age in India* (New Delhi, 1971).  
*Prehistoric Chronology and Radiocarbon Dating in India*  
(New Delhi, 1974).  
*Indian Art* (Varanasi, 1965).  
*Utnur Excavations* (Hyderabad, 1961).  
*Neolithic Cattle Keepers of South India* (Cambridge,  
1963).  
*The Birth of Indian Civilization* (Penguin Books, London,  
1968).  
*Excavations at Shah Tepe, Iran* (Stockholm, 1945).  
*India and China*, 2nd ed., (Bombay, 1950).  
*India and Central Asia*.  
*Ancient Iran—its contribution to Human Progress*  
(Bombay, 1936).  
*Hellenism in Ancient India*, IIIrd ed. (Delhi, 1961).  
*Iron Age in India* (Delhi, 1965).  
*2500 Years of Buddhism* (Delhi, 1971).  
*Turkestan down to the Mongol invasion II*.  
*The Wonder that was India* (London, 1954, Bombay, 1963).  
*Asoka* (2nd ed.,) Calcutta 1932.  
*Archaeological Discoveries in Southern Arabia* (Baltimore,  
1958).  
*Prehistoric Investigations in Iraqi Kuradistan*, (Chicago,  
1960).  
*Catalogue of Prehistoric Antiquities in the Indian Museum,*  
*Calcutta* (Simla, 1917).  
*India and the World* (Hoshiarpur, 1964).  
*Grammar of the Dravidians Language* (Madras, 1956).  
  
*Cambridge Ancient History*, Vol. VII, (Cambridge, 1954).  
*Buried Empires* (London, 1939).  
*Fouilles de Mundigak*, 2 vols. (Paris, 1961).

- *Fouilles de' Amri*, 2 vols. (Paris, 1964).
- Charlesworth, M. P.     *Trade-Routes and Commerce of the Roman Empire* (Cambridge, 1924).
- Childe, V. G.            *The Aryans, A study of Indo-European Origins* (London, 1926).
- *New Light on the Most Ancient East* (London, 1934).
- *What Happened in History* (Harmondsworth, 1954).
- Coles, T. M. & Higgs, E. S.     *The Archaeology of Early Man.*, (London, 1968).
- Contenau, G. and Ghirshman, R.     *Fouilles du Tepe Giyan pres de Nehavend 1931 et 1932* (Paris, 1935).
- Coomaraswamy, A.            *History of Indian and Indonesian Art* (London, 1927).
- Dani, A. H.                *Prehistory and Protohistory of Eastern India*, (Calcutta, 1960).
- Das, A. C.                *Rigvedic India*, 2nd ed., (Calcutta, 1927).
- Das Gupta, P. C.            *The Excavations of Pandu-Rajar-Dhibi* (Calcutta, 1964).
- Davar, F. C.                *India and Iran through the Ages* (Bombay, 1953).
- Deo, S. B.                *Excavations at Takalghat and Khapa* (Nagpur, 1970).
- Dey, M. L.                *Geographical Dictionary of Ancient and Medieval India* (Calcutta, 1899).
- De Terra, H., & Paterson, T. T.     *Studies on the Ice Age in India and associated Human Cultures* (Washington, 1939),
- Dixit, K. N.                *Prehistoric Civilization of the Indus Valley*, Sir William Meyer Lectures, 1935 (Madras, 1939).
- Ehrichs, R. W.                *Chronologies in Old World Archaeology* (Chicago, 1965).
- Elphinstone, M. and Cowell, E. B.     *Ancient India* (Calcutta, 1953).
- Evans, A.                *Palace of Minos at Knossos*, Vol. I-III, IV, 1921-30, (London, 1935).
- Fairservis, W. A.            *Excavations in the Quetta Valley* (New York, 1956).
- *Archaeological Survey in the Zhob and Loralai Districts* (New York, 1959).
- *Archaeological Studies in the Seistan basin of South Western Afghanistan and Eastern Iran* (New York, 1961).
- *The Roots of Ancient India* (London, 1971).
- Fergusson, J.                *Rude Stone Monuments in all countries : their Age and Uses* (London, 1872).
- Frankfort, H.                *Cylinder Seals, A documentary Essay on the Art and Religion of the Ancient Near East*, (London, 1939).
- Gajjar, I. N.                *Ancient Indian Art and the West* (Bombay, 1971).
- Gerzen                    *Researches on Ptolemy's Geography of Eastern Asia*, Vol. I, (London, 1909).

- Ghirshman, R. *Fouilles de Sialk, Pres Kashan* (Paris, 1938-9)
- Ghosh, A. *The City in Early Historical India*, (Simla, 1973).
- Ghosh, A. K. *The Stone Age Cultures of West Bengal* Unpublished Ph. D., Thesis.
- Goodrich, C. *A Short History of the Chinese People* (London, 1951).
- Gordon, D. H. *The Prehistoric Background of Indian Culture* (Bombay, 1958).
- Goyal, S. R. *Origin of Brahmi Script* (In Press)
- Guha, B. S. *Racial elements in the Population* (Oxford Pamphlets on Indian Affairs, 1944).
- Gupta, S. P. *Disposal of the Dead and Physical Types in Ancient India* (Delhi, 1972).
- Hall, H. R. *The Civilization of Greece in the Bronze Age* (London, 1928).
- Herzfeld, E. *Iran in the Ancient East* (London, New York, 1941).
- *Zoroaster and His World*, Vol. II (Princeton, 1947).
- Hopkins, E. W. *Religions of India* (Boston, 1895).
- Jairazbhoy, R. A. *Foreign Influence in Ancient India* (Bombay, 1963).
- James, E. O. *The Cult of the Mother Goddess* (London, 1959).
- Kenyon, K. M. *Archaeology in the Holy Land* (London, 1960).
- Khan, A. W. *Yelleswaram Excavation* (Hyderabad, 1963).
- Khan, F. A. *Indus Valley and Early Iran* (Karachi, 1964).
- King, L. W. *History of Sumer and Akkad*, Vol. I (London, 1910).
- Lagdon, S. *Excavations at Kish* (Paris, 1924).
- Lamberg Karlovsky, C.C. *The Proto-Elamite Settlement at Tepe Yahya* (Iran, 1971).
- Leakey, L. S. B. & Goodall, V. M. *Unveiling Man's Origin* (London, 1970).
- Legrain, L. *Culture of the Babylonians* (Philadelphia, 1925).
- Macdonell, A. A. *A History of Sanskrit Literature* (London, 1900).
- Macdonell, A. A. and Keith, A. B. *Vedic Index*, Vol. 2 (London, 1912).
- Mackay, E. *Further Excavations at Mohenjo-daro*, 2 vols. (New Delhi, 1937).
- *Chanhudaro Excavations, 1935* (New Haven, Connecticut, 1943).
- *Early Indus Civilisation* (London, 1948).
- Majumdar, R. C. (ed.) *The History and Culture of the Indian People*, Vol. I. *The Vedic Age* (Bombay, 1960).
- *The History and Culture of the Indian People*, Vol. II. *The Age of Imperial Unity* (Bombay, 1960).
- Mallowan, M. E. L. and Rose, J. C. *Prehistoric Assyria : The Excavations at Tell Arpachiyah*, (Oxford, 1935).

- Malik, S. C. *Indian Civilization : The Formative Period* (Simla, 1968).
- Manchanda, O. *A Study of the Harappan Pottery* (Delhi, 1972).
- Marshall, J. *Mohenjo-daro and the Indus Civilization*, 3 Vols. (London, 1931).
- *Taxila*, 3 Vols. (Cambridge, 1951).
- Masson, V. M. and Sarianidi, V. I. *Central Asia: Turkmenia before the Achaemenids* (London, 1972).
- Max Müller *Gifford Lectures on Physical Religion* (London, 1901).
- *The Vedas* (Calcutta, 1956).
- *Three Lectures on the Science of Language* 1889 (Varanasi, 1961).
- McCown, D. E. *The Comparative Stratigraphy of Early Iran* (Chicago, 1942).
- Mehta, R. L. *Pre-Buddhist India* (Bombay, 1939).
- Mellart, J. *Catal Huyuk* (London, 1967).
- Mitra, S. K. *India's Cultural Empire and Her Future*, 2nd ed. (Madras, 1947).
- Mode, H. *Harappa Culture and the West* (Calcutta, 1961).
- Mookerji, R. K. *Indian Shipping* (Bombay, 1912).
- *Ancient India* (Allahabad, 1956).
- Moti Chandra *Hindu Civilization*, Pt. I (Bombay, 1963).
- *Geographical and Economic Studies in Mahābhārata, Upāyanaparva* (Lucknow, 1945).
- Mughal, M. R. *Sārthavāha* (Hindi) (Patna, 1953).
- *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan* (3000—2400 B. C.) Ph. D. Dissertation, University of Pennsylvania, 1970.
- *Present State of Research on the Indus Valley Civilization* (Karachi, 1973).
- Muir, J. *Original Sanskrit Texts of the Origin and History of the People of India*, Vol. I, 2nd ed. (London, 1868).
- Mukhopadhyay, G. *History of Indian Medicine* (Calcutta, 1923).
- Mukerjee, R.K. *A History of Indian Civilization* (Bombay, 1956).
- *The Culture and Art of India* (London, 1959).
- Myers, B.S. *Cambridge Ancient History*, Vol. I (Cambridge, 1924).
- Nagarajarao, M.S. et. el *The Stone Age Hill Dwellers of Tekkalkota* (Poona, 1965).
- Nagarajarao, M.S. *Protohistoric Cultures of Tungabhadra Valley—A Report on Hallur Excavations* (Bangalore, 1971).
- Nobel, J. *Central Asia: the connecting Link between East and West, and other Lectures* (Nagpur, 1932).
- Olmstead, A.T. *History of the Persian Empire* (Chicago, 1943).

- Oppenheim, B.M.  
Pande, B.M.  
and  
Ramachandran, K.S.
- Pandey, R.B.  
Pannikar, K.M.  
Petrie, W.M.F.
- Piggott, S.  
Piggott, S. (ed.)  
Pumpelley, R.
- Rahula, W.  
Ramachandran, K.S.  
Rao, S.R.  
Rapson, E.J.  
—  
—
- Rowland, B.  
Rawlinson, H.G.
- Ray, N.R.  
—
- Ray Chaudhary, H.C.  
Rea, A.
- Reddy, V. R.
- Rhys Davids,  
T.W. (Mrs.)  
Rhys-Davids, T.W.  
Rowley, H.H. (ed.)  
Saggs, H.W.F.  
Saletore, B.A.
- Tell Halaf* (New York, 1931).  
*A Bibliography on Harappan Culture* (Florida, 1971).
- Hindu Samskaras* (Banaras, 1949).  
*India and China* (Calcutta, 1957).  
*Memphis I* (London, 1909).  
*Prehistoric Egypt* (London, 1917).  
*Ancient Gaza IV* (London, 1931-34).  
*Prehistoric India* (Penguin Books, 1950).  
*The Dawn of Civilization* (London, 1961).  
*Explorations in Turkestan Prehistoric Civilizations of Anau I and II*, Vol. I (Washington, 1905).  
*History of Buddhism in Ceylon* (Colombo, 1956).  
*A Bibliography on Indian Megaliths* (Madras, 1971).  
*Lothal and Indus Civilization* (Bombay, 1973).  
*Indian Coins* (Strassburg, 1897).  
*The Cambridge History of India*, Vol. I, *Ancient India* (Delhi, 1955).  
*Art : Indian Drama in Encyclopaedia of Religion and Ethics* Vol. IV.  
*The Art and Architecture of India*, 2nd Edition (London).  
*Intercourse Between India and the Western World* (Cambridge, 1916).  
*India* (London, 1937).  
*Maurya and Sunga Art* (Calcutta, 1945).  
*Numismatic Notes and Monographs*, 8, *Numismatic Society of India* (Varanasi, 1959).  
*Studies in Indian Antiquities* (Calcutta, 1932).  
*Catalogue of Prehistoric Antiquities from Adichanallur and Perumbair* (Madras, 1915).  
*Pre and Proto-history of South-west Andhra Pradesh* (Unpublished Ph. D. Thesis, Deccan College, Poona, 1968).  
*Buddhist Birth Stories*, Vol. I (London, 1880).  
*Buddhist India* (Calcutta, 1903).  
*Atlas of Mesopotamia*, Nelson (London, 1962).  
*The Greatness that was Babylon* (London, 1962).  
*India's Diplomatic Relations with the West* (Bombay, 1958).

- Sankalia, H.D. and Deo, S.B. *The Excavations at Maheshwar and Navdatoli* (Poona, 1960).
- Sankalia, H.D. and others *From History to Prehistory at Nevasa* (Poona, 1960).
- Sankalia, H.D. — *Ramayana, Myth or Reality* (New Delhi, 1973).  
*Excavations at Langmaj*: 1944—63, Part I, Archaeology (Poona, 1965).
- Sankalia, H. D. *The Prehistory and Protohistory of India and Pakistan* (Bomby, 1962) (Revised Edition, 1974).  
*Excavations at Ahar (Tambavati)*, (Poona, 1969).
- Sankalia, H.D. Deo, S.B. and Ansari, Z.D. — *Chalcolithic Navdatoli* (*The Excavations at Navdatoli 1957-59*) (Poona, Baroda, 1971).  
*Age of the Nandas and Mauryas*, 1st. ed. (Banaras, 1952).  
*New Light on the Indus Civilization*, Vol. I and II (Delhi 1965).
- Schmidt, E.F. *Excavations at Tepe Hissar, Damghan* (Philadelphia, 1937).
- Seshadri, M. *A Report of the Excavations at T. Narsipur* (Mysore, 1971).
- Sewell, R. *List of Antiquarian Remains in the Presidency of Madras* (1882), Vol. I.
- Sharma, R.K. *Sansara Ki Prachin Sabhyatayen tatha Bharat se unka Sambandha*.
- Sharma, T. C. *Prehistoric Archaeology of Assam* (*A Study of Neolithic Cultures*) Unpublished Ph.D. Thesis, London University, 1966.
- Singhal, D.P. *India and the World Civilization* (New York, 1969)
- Sircar, D.C. — *Select Inscriptions bearing on Indian History and Civilization* Vol. I, Calcutta, 1942).
- Smith, V.A. — *Cosmography and Geography in Early Indian Literature* (Calcutta, 1967).  
*Indian Epigraphy* (New Delhi, 1965).  
*A History of Fine Arts in India and Ceylon*, 2nd ed. (Oxford, 1930).
- Spate, O.H.K. — *The Early History of India*, 4th ed. (Oxford, 1957).  
*India and Pakistan—a regional Geography* (London, 1954).
- Speiser, E.A. *Excavations at Tepe Gawra*, Vol. I (Philadelphia, 1935).
- Starr, R.F.S. *Indus Valley Painted Pottery* (London, 1941).
- Stein, A. — *Ancient Khotan* (Oxford, 1907).  
*Archaeological Reconnaissances in North-western India and South-eastern Iran* (London, 1937).

- Subbarao, B. *Stone Age Cultures of Bellary* (Poona, 1948).
- *Personality of India*, 1st ed. (Baroda, 1956, 2nd ed. 1958).
- Tarn, W.W. *Greeks in Bactria and India*, 2nd ed. (Cambridge, 1951).
- Tarn, W.W. and Griffiths *Hellenistic Civilization* (London, 1952).
- Taylor, J. *The Origin of the Aryans*, 2nd ed. (London, 1892).
- Thapar, R. *Aśoka and the Decline of the Mauryas* (Oxford, 1961).
- Thomas, P. *Story of the Cultural Empire* (Ernakulam).
- Thompson *A Dictionary of Assyrian Botany* (1949).
- Tilak, B. G. *The Orion* (Poona, 1916).
- *The Arctic Home in the Vedas* (Poona, 1956).
- Turner, R. *The Great Cultural Tradition*, Vol. I, First edition (London, 1941).
- Upadhyaya, B. S. *Bhārīya Kalā Tathā Sanskriti kī Bhūmikā* (Delhi, 1965).
- Vats, M. S. *Excavations at Harappa*, 2 Vols. (Calcutta, 1940).
- Vidylankar, J. *Bhārat Bhūmi aur Uske Nivāsī* (Agra)
- Vyas, S. N. *India in the Ramayana Age* (Delhi, 1967).
- Wace, A. J. B. and Thompson, M. S. *Prehistoric Thessaly* (Cambridge, 1912).
- Waddell, L. A. *Report on the Excavations at Pataliputra* (Calcutta, 1903).
- Ward, W. H. *The Seal cylinders of Western Asia* (Washington, 1910).
- Watson, W. *Early Civilization in China* (London, 1966).
- Wheeler, R. E. M. *Early India and Pakistan* (Bombay, 1959).
- *Civilization of the Indus Valley and Beyond* (London, 1966).
- Wheeler, R. E. M. *Indus Civilization*, 2nd ed. (Cambridge, 1953).
- Winternitz, M. *A History of Indian Literature*, Vol. I (Calcutta, 1927).
- Woolley C. L. and Hall, H. R. *Ur Excavations*, Vol. I, *Al, Ubaid*, (London, 1927).
- Woolley, C. L. *Ur of Chaldees* (London, 1929).
- *The Sumerians* (Oxford, 1929).
- *Ur Excavations*, Vol. II, Royal Cemetery (London, 1934).
- Zimmer, H. *Developement of Sumerian Art*, (London, 1935).
- *The Art of Indian Asia* (New York, 1955).

## RESEARCH ARTICLES

- Agrawal, D. P. "New Evidence for a shorter Chronology", *Current Science*, Vol. 143, No. 3609, 1964, pp. 950-52.

- Agrawal, D. P.  
and  
Kusumgar, S.
- Agrawal, R. C.
- Agrawal, V. S.
- 
- 
- Allchin, F. R.
- 
- Altekar, A. S.
- Anderson, J. G.
- Aravamuthan, J. G.
- Archaeological Survey of India Annual Reports.*
- Arunkumar
- Bagchi, P. C.
- 
- Banerjee, N. R.
- 
- Banerjee, N. R. et. el.
- Banerjee, N. R.
- Banerjee, P.
- Bernhard, W.
- Bibby, G.
- "Radio-Carbon Dates of Samples from Southern Neolithic Sites", *Current Science*, Dec. 5, 1966, pp. 585-86.
- "Embassies in Ancient India", *Mod. Review*, Vol. 87, Calcutta, 1950.
- "Embassies in Ancient India", *JUPHS*, Vol. XX, Lucknow, 1947.
- "Some Foreign words in Ancient Sanskrit Literature", *IHQ*, Vol. 27, Calcutta, 1951.
- "Janpada and the Greek City State", *IHQ*, Vol. 30, Calcutta, 1954.
- "Piklihal Excavations", *APGAS*, No. 1, Hyderabad, 1960.
- "Pottery Head-rests from Narasipur Sangam" in *Studies in Prehistory* (Eds. D. Sen and A. K. Ghosh), Calcutta, 1966, pp. 58-63.
- "Origin and Early History of Coinage in Ancient India", *JNSI*, Vol. XV, Part I, Bombay, 1953.
- "Researches into the Prehistory of the Chinese", *BMFEA*, Vol. 15, 1943, pp. 1-304.
- "A link between India and Crete", *Man*, Vol. 39, London, 1939.
- 1862-65; 1878, 1908-09; 1909-10; 1910-11; 1916-17; 1919-20; 1923-24; 1924-25, 1934-35.
- "On the location of Dilmun", *JOI*, Vol. XXI, No. 4, Baroda, 1972.
- "The Role of Central Asian Nomads in the History of India", *JOGIS*, Vol. X, No. 2.
- "India and China", in *Greater India*, Bombay, 1960.
- "The Megalithic Problem of Chingleput in the light of the recent Exploration", *AI*, No. 12, New Delhi, 1956, pp. 21-34.
- "The Excavations at Sengamedu", *The March of Time*, June, 1956, pp. 43-46.
- "Sanur 1950 and 1952 : a megalithic site in District Chingleput", *AI*, No. 15, New Delhi, 1959, pp. 4-42.
- "Megalithic Problem of India", *Studies in Prehistory*, Calcutta, 1966, pp. 163-178.
- "Foreign Elements in Neo-Brahmanic Society", *JBORS*, Vol. 41, Patna, 1955, pp. 155 ff.
- "Human skeletal remains from the cemetery of Timargarh", *AP*, Vol. III, Peshwar, 1967.
- "Bahrains oldtidshoevedstad gennes 4000 AR", *Kuml*, Denmark, 1957.

- "The Ancient Indian Style seals from Bahrain", *Antiquity*, Vol. 32, London, 1958, pp. 242-246.
- Billimoria, N. M. "The Iranians in Ancient India, Especially in Sind and the Punjab", *Journal of Sindh Historical Society*, Vol. II, Pt. I, Karachi, 1936.
- Biscione, R. "Dynamics of an early South Asian Urbanisation: The First Period of Shahr-i-Sokhta and its connections with Southern Turkmenia", *South Asian Archaeology*, London, 1973, pp. 105-118.
- Buddha Prakash "Vyasa (A Study of Indo-Babylonian Cultural Contacts)", *JBOAS*, Vol. 37, Patna, 1951.
- Carleyle, A. C. L. "Report on a Tour in East Rajputana in 1871-72 and 1872-73", *ASIAR*, Vol. VI, 1878, pp. 13 ff.
- Carter, H. J. "Geography of the South-west Coast of Arabia," *JBBRAS*, Vol. III, Pts. I, and II, Bombay, 1847-56, pp. 262 ff.
- Chakrabortty, S. K. "The Persian and Greek Coins and their imitations in Ancient India", *IHQ*, Vol. 10, Calcutta, 1934.
- Chanda, R. P. "The Beginning of Art in Eastern India", *MASI*, No. 30, Calcutta, 1927.
- Chatterji, S. K. "Survival of the Prehistoric Civilization of the Indus Valley", *MASI*, Calcutta, 1929.
- Chattopadhyay, B.K. "Kirata-Jana-Krti the Indo-Mongoloids, their contribution to the History and Culture of India", *JRAS*, Bengal (Letters), Vol. XVI, 1950, pp. 169 ff.
- Chattopadhyaya, S. "Mohenjo-daro and the Aryan Colonization", *VIJ*, Vol. III, Pt. I, Hoshiarpur, 1965.
- "Foreign Notices of Achaemenid India", *IHQ*, Vol. 26, Calcutta, 1950.
- Childe, V.G. "The Achaemenids and India", *IHQ*, Vol. 26, Calcutta, 1950.
- "India and the West Before Darius", *Antiquity*, Vol. XVIII, England, 1939.
- Cunningham, A. "Megaliths", *AI*, No. 4, New Delhi, 1947-48, pp. 4-13.
- Dales, G.F. "Ancient Geography of India", ed. by S.N. Majumdar, *ASIAR*, Vol. V, 1924.
- "Excavations at Balakot, Pakistan, 1973", *Journal of Field Archaeology*, Vol. I, No. 1/2, 1974, pp. 1-22.
- Dani, A.H. "Archaeological and Radio-Carbon Chronologies for protohistoric South Asia", *South Asian Archaeology*, London, 1973, pp. 157-70.
- "Sanghao Cave Excavations", *AP*, Vol. I, Peshawar, 1964.
- "Timargarha and Gandhara Grave Culture", *AP*, Vol. III, Peshawar, 1969.

- Daniel, John M.B. "Excavations in the Gomal Valley", *AP*, Vol. V, Peshawar, 1970-71. pp. 1-176.
- Das, M.L. "Rāvana's Laṅkā", *ABORI*, Vol. XXI, Poona, 1940, pp. 270-279.
- Deb, H.K. "Avesta From Hindu Point of View", *IC*, Vol. 15, Calcutta, 1948-49.
- DeCardi, B. "Vedic India and the Middle West", *JRAS*, Bengal, Vol. XIV, No. 2, Calcutta, 1948.
- Deo, S.B. "New Wares and Fresh Problems from Baluchistan", *Antiquity*, Vol. XXXIII, England, 1959, pp. 15-28.
- "British Expeditions to Kalat 1948 and 1951", *Pakistan Archaeology*, No. 1, Karachi, 1964 and 1965.
- Deshpande, M.N. "Megaliths in Maharashtra", *SPPMI*, Varanasi, 1969, pp. 27-36.
- De Silva, D.A. Presidential Address of Section I, *PIHC*, 24th Session, Poona, 1963.
- Dhavalikar, M.K. "A Megalithic Plough Coulter from Brahamagri", *SPPMI*, Varanasi, 1969, pp. 66, ff.
- "Development and Decline of the Deccan Chalcolithic" in (Eds. D.P. Agrawal and A. Ghosh) *Radio-carbon and Indian Archaeology* (Bombay, 1973) pp. 138-47.
- Dikshit, K.N. "The Origin and Distribution of Megaliths in India", *SPPMI*, Varanasi, 1969, pp. 1-11.
- Dikshitar, V.R.R.C. "Southern India and China," *SIS*, Vol. II, Part I, Calcutta 1946.
- "South India and Ceylon", *IC*, Vol. 15, Calcutta, 1948-49.
- Dixit, S.K. "Some Aspects of Civilization of the Copper and Bronze Age in India", *ABORI*, Vol. 31, Poona, 1950.
- Dupree, Louis "Deh Morasi Ghundai : A chalcolithic site in South Central Afghanistan", *APAMNH*, Vol. 50, New York, 1963, pp. 57-136.
- During Caspers, E.C.L. "Further Evidence for Cultural Relations between India, Baluchistan and Iran and Mesopotamia in Early Dynastic Times", *JNES*, Vol. XXIV, 1-2, Chicago, 1965, pp. 53-55.
- "New Archaeological Evidence for maritime trade in the Persian Gulf during Protoliterate Period", *East and West*, Vol. 21 (I-2), Rome, 1971, pp. 21-44.
- "Etched Cornelian Beads", *BIA*, No. 10 : 1971, London, 1972, pp. 83-98.

- Durrani, F.A. "Stone Vases as evidence of connection between Mesopotamia and the Indus Valley", *AP*, Vol. I, Peshawar, 1964, pp. 51-96.
- Dwivedi, V.P. "Export of Indian Ivory Carvings to European and Asian Countries", *Studies in the Foreign Relations of India* (from earliest times to 1947), Hyderabad, 1975, pp. 456-461.
- Epigraphia Indica*—  
Calcutta Vol. VIII — 1905-06  
Vol. XIX — 1927-28  
Vol. XXIV — 1937-38
- Enault, J.F. and "Chalcolithic Pottery from four sites in the Bolan area of Baluchistan, West Pakistan", *South Asian Archaeology*, London, 1973, pp. 181-196.
- Jarriage, J.F.
- Fabri, C.L. "The Cretan Bull-Grappling Sports and Bull-sacrifice in the Indus Valley Civilization", *ASIAR*, 1934-35.
- Fairservis, W.A. Jr. "A Sumero-Babylonian Inscription discovered at Mohenjo-daro", *IC*, Vol. III, No. 4, Calcutta, 1937.
- Field, H. "The chronology of the Harappan Civilization and the Aryan invasions", *Man*, Vol. 56, London, 1956.
- Frankfort, H. "Stearite Vases from Kish", *Antiquity*, Vol. VII, England.  
"The Indus Civilization and the Near East", *ABIA*, 1932, Kern Institute, Leiden.
- "Tell Asmar and Khafaja", *Oriental Institute of Communication*, No. 13, Chicago, 1930-33.  
Illustrated London News, July 15, 1933.  
— "Tell Asmar, Khafaja and Khorasabad", *Oriental Institute of Communications*, No. 16, Chicago, 1933.  
— "Iraq Excavations of the Oriental Inst., 1932-33", *Oriental Institute of Communication*, No. 17, Chicago, 1934.  
— *Oriental Institute of Communications*, No. 20, Chicago.  
— "More Sculptures from Diyalah Region", *Oriental Institute Publications*, LX, No. 235, A.B. 1943.
- Frere, H.B.E. "Descriptive Notices of Antiquities in Scinde", *JBBRAS*, Vol. V, Bombay, 1857, pp. 353 ff.
- Garrod, D.A.E. "The Stone Age of Pakistan", *Antiquity*, Vol. VIII, London.
- Gadd, C.J. "Seals of Ancient Indian Style found at Ur", *Proceedings of the British Academy*, Vol. XVIII, London, 1932.
- Gaur, R.C. "Date of Painted Grey Ware", *Paper read at Aligarh Conference*, August, 1968.
- Geiger, W. "A Short History of Ceylon from the Fifth century B.C. to 4th century A.D.", *IHQ*, Vol. II, No. 1, Calcutta, 1926.

- Ghosh, A and Panigrahi, K.C. "Pottery of Ahichchhatra", *AI*, No. 1, New Delhi, 1946, pp. 37 ff.
- Ghosh, A. "The Indus Civilization : Its Origin, Authors, Extent and Chronology", *Indian Prehistory* : 1964, Poona, 1965, pp. 113-136.
- "Megaliths in Yemen Arab Republic", *Puratattva*, No. 7, New Delhi, 1974, pp. 81-82.
- Ghosh, J. C. "Some Additional Notes on Foreign elements in the Hindu Population", *ABORI*, Vol. XII, Poona, 1930-31, p. 167 ff.
- "Note on Rāvana's Lanka located in Central India", *ABORI*, Vol. XIX, Poona, 1939, pp. 84-86.
- Ghosh, M.M. "Origin and Antiquity of the Sanskrit word Cina as the name of China", *ABORI*, Vol. 42, Poona, 1963.
- Ghosh, N. C. "On the Neolithic Pottery of Eastern India", *JOI*, Vol. XIX, 1966, pp. 333-339.
- Glob, P. V. "Prehistoric Discoveries in Qatar", *Kuml*, Denmark, 1957 p. 177 ff.
- Gordon, D. H. "Sialk, Giyan, Hissar and the Indo-Iranian Connections", *Man in India*, Vol. XXVII, Ranchi, 1947, pp. 195-241.
- "The Chronology of the third cultural period at Tepe Hissar", *Iraq*, Vol. 13, London, 1951.
- The Pottery Industries of the Indo-Iranian Border : A Restatement and Tentative Chronology, *AI*, No. 10-11 New Delhi, 1954-55, pp. 157-191.
- Goswami, M. C. and Bhagabati, A. C. "A Preliminary Report on a collection from Neolithic tools types from Western Assam", *Man in India*, Vol. 39, Ranchi, 1959, pp. 312-24.
- Goswami, M. C. and Sharma, T. C. "Report on the Investigation into Prehistoric Archaeology of North Cachar Hills, Assam", *JUG*, XIII, 2, 1962, pp. 63-66.
- Gupta, N. N. "The Veda and the Avesta", *Modern Review*, Vol. LVIII, Calcutta, 1935.
- Gupta, S. P. "Arrowheads : its History and Technology", *JBRS*, Vol. XLVII, Patna, 1961, pp. 129-142.
- "Indian Copper Hoards", *JBRS*, Vol XLIX, Patna, 1963.
- "The chronology of the Punch Marked Coins", *Proceeding of the Seminar on Punch Marked Coins*, Banaras Hindu University, 1966, pp. 39-42.
- "The Mountainous Neolithic Cultures of Central Asia and Northern India", *The Anthropologist*, Vol XIV, No. 2, (1967), New Delhi, pp. 126-136.
- "Sohan Sutlej and Mahadevian—A Review of the tools and

- Gupta, S. P.  
and  
Schetanko, Y.  
Haimendorf, V. F.
- Hargreaves, H.
- Heichelheim, F. M.
- Heine-Geldern, R.
- Hirth, H.
- Hodiwala, S. K.
- Indian Archaeology, A Review-*
- Iyengar, P. T. S.
- Jacobi, H.
- Jayaswal, K. P.
- Jayaswal, V.
- John Irwin
- —
- terms of the Indian Chopper-Choppring Culture Assemblage”, *JBRS*, vol. LV, 1969.
- “India and Central Asia in the Old Stone Age” in *Central Asia*, New Delhi, 1970.
- “Neolithic Finds from Lou-Lan : Origin and Extra-territorial Affinities”, *Bharati*, Nos. X and XI, (1966-68), Varanasi, pp. 187-188.
- “Prehistoric Indian Cultures in Soviet Central Asia”, *ICWTC*, Madras, 1970, pp. 239-44.
- “Gulf of Oman : The Original Home of Indian Megaliths”, *Puratattva*, No. 4, New Delhi, 1970-71, pp. 4 ff.
- “A Model for understanding the First Urbanization in India”, *Puratattva*, No. 6, New Delhi, 1972-73, pp. 42-50.
- “New Evidence of the Harappa Culture in The Soviet Central Asia”, *Bharati*, Nos. X and XI, Varanasi, 1966-68.
- “The Problem of Megalithic Cultures in Middle India”, *Man in India*, Vol. XXV, Ranchi, 1945, pp. 73-86.
- “New Aspects of the Dravidian Problem”, *Tamil Culture*, Vol. 2, No. 2, 1953, pp. 127-135.
- “Excavations in Baluchistan”, *MASI*, No. 35, Calcutta, 1929.
- “New Light on the influence of Hellenistic Financial Administration in the Near East and India”, *Economic History*, Feb. 1938, London.
- “Coming of Aryans and end of the Harappan Civilization,” *Man*, Vol. 56, London, 1956.
- “The story of Chang K'ien, China's Pioneer in Western Asia”, *JAOS*, 1917, pp. 96 ff.
- “Indo-Iranian Religion” in the *K. R. Cama Orient Institute Journal* No. 4.
- 1953-54, 1954-55, 1955-56, 1956-57, 1957-58, 1958-59, 1959-60, 1960-61, 1961-62, 1962-63, 1963-64, 1964-65, 1965-66, 1966-67, 1967-68, 1968-69.
- “The Trade of India”, *IHQ*, Vol. II, Calcutta, 1926.
- “On Antiquity of Vedic Culture”, *JRAS*, 1909, London.
- “Proclamation of Aśoka as a Buddhist and his Jambudipa”, *Indian Antiquary*, Vol. 62, London, 1933.
- “Atechno typological Reiview of the Middle Palaeolithic Cultures of India”, *Puratattva* No. 7 New Delhi, 1974.
- “The Heliodorus Pillar : A fresh Appraisal”, *Art and Archaeology Research Papers*, No. 6, London, 1974, pp. 1-3.

- “Aśokan Pillars : A reassessment of the Evidence”, *Burlington Magazine*, Vol. CXV, London Nov. 1973, pp. 706-720; CXV, Dec. 1974, pp. 712-726.
- Joshi, J. P. “Exploration in Kutch and Excavation at Surkotada and New Light on Harappan migration”, *JOI*, Vol. XXII, Nos. 1-2, Baroda, 1972.
- Kaikini, V. N. “Ancient India and the Outer World”, *PIHC*, Vol. X, Allahabad, 1947.
- Kamata, S. “Cultural Exchange Between India, China and Japan”, *ICWTC*, Madras, 1970, pp. 315-324.
- Kaye, G. R. “Hindu Astronomy”, *MASI*, No. 18, Calcutta, 1924.
- Kennedy, J. “The Gospels of the Infancy, the Lalitvistara and the Visnu Purana : or the Transmission of Religious Legends Between India and the West”, *JRAS*, London, 1917.
- “The Early Commerce of Babylon with India”, *JRAS*, London, 1898.
- “The Prehistoric Aryans and the kings of Mitani”, *JRAS*, 1909, pp. 1107-1119.
- Khan, F. A. “Excavations at Kot Diji”, *Pakistan Archaeology*, No. 2, Karachi, 1965, pp. 11-85.
- “Excavations at Sarai Khola”, *Pakistan Archaeology*, No. 5, Karachi, 1965.
- Khatri, A. P. “Mahadevian: An Oldowan Pebble Culture in India”, *Asian Perspective*, Vol. 6, Hongkong, 1962.
- Kibe, M. V. “Ravana's Lanka located in Central India”, *IHQ*, Vol. IV, Calcutta, 1928, pp. 694-702.
- “Further light on Ravana's Lanka located in Central India from Valmiki's Ramayana”, *ABORI*, Vol. XVII, Poona, 1935, pp. 371-384.
- Kramer, S. N. “The Indus Civilization and Dilmun, The Sumerian Paradise Land”, *Expedition*, Vol. VI, Pennsylvania, 1964, pp. 44-52.
- Krishnaswami, V. D. “Stone Age in India”, *AI*, No. 3, New Delhi, 1947.
- “Megalithic types of South India”, *AI*, No. 5, New Delhi, 1949, pp. 34-45.
- “The Neolithic Pattern of India,” *AI*, No. 16, New Delhi, 1962, pp. 25-65,
- Lahiri, A. “Indian and Babylonian Demonology: A Comparative Study”, *VIJ*, Vol. IV, Pt. II, Hoshiarpur, 1966.
- Lal, B. B. “The Painted Grey Ware of the Upper Gangetic Basin”, *JRASB* (Letters) Vol. XVI, No. 1, Calcutta, 1950.
- “Further Copper Hoards from the Gangetic Basin and a Review of the Problem”, *AI*, No. 7, New Delhi, 1951, pp. 20-39.

- "Protohistoric Investigation", *AI*, No. 9, New Delhi, 1953.
- "Excavations at Hastinapur and other Explorations in Upper Ganga and Sutlej Basins 1950-52", *AI*, No. 10-11, New Delhi, 1954-55, pp. 5-151.
- "Palaeoliths from the Beas and Banganga valley, Panjab", *AI*, No. 12, New Delhi, 1956.
- "Birbhanpur, a Microlithic site in the Damodar Valley," *AI*, No. 14, New Delhi, 1958.
- "Some Observations on Harappan Script", *ICWTC*, Madras, 1970, pp. 189-202.
- "Archaeology and the two Indian Epics", *ABORI*, Vol. LIV, 1973, Poona, 1974.
- Lal, B. B.  
and  
Thapar, B. K. — "Excavations at Kalibangan, New Light on the Indus Civilization", *Cultural Forum*, No. 34, New Delhi, 1967.
- Lala Aditya Narain — "Excavations at Kalibangan", *IAR*, 1961-62, to 1967-68.
- Lamberg Karlovsky  
C. C. — "The Neolithic Settlement at Chirand", *JBRSP*, Vol. LVI, 1970, Patna, pp. 1-35.
- "The Cairn Burials of South-eastern Iran", *East and West*, NS, Vol. 18 (Nos. 3-4) Rome, 1968, pp. 269-76.
- "Excavations at Tepe Yahya, Iran 1967-69, Progress Report I (American School of Prehistoric Research Bulletin, Cambridge, 1970).
- Lamberg Karlavsky,  
C. C. and  
Philip, L. Khol — "Early Bronze Age of Iran as seen from Tepe Yahya", *Expedition*, Vol. 13, Nos. 3-4, Pennsylvania, 1971, pp. 14-21.
- Lamberg Karlovsky,  
C.C. & Tosi, M. — "Trade Mechanism in Indus Mesopotamian Interrelations", *JAOS*, Vol. 92, No. 2, April-June, New Haven, 1972, pp. 222-229.
- "Shahr-i-Sokhta and Tepe Yahya : Tracks on the Earliest History of the Iranian Plateau", *East & West*, Vol. 23, Nos. 1-2, Rome, 1973.
- Law, B. C. — "Contemporaneity of the Kings of India and Ceylon", *PIHC*, 3rd Session, Calcutta, 1939.
- "Expansion of Buddhism in India and Abroad", *NIA*, Vol. 2, Bombay 1939-40.
- Leakey, L. S. B.  
Everndern, J. F.,  
Curtis, G. H. — "Age of Bed I, Olduvai Gorge, Tanganyka", *Nature*, Vol. 191, No. 4787, London, 1961.
- Leshnik, L. S. — "Land use and ecological factors in Prehistoric North-west India", *South Asian Archaeology*, London, 1973, pp. 67-84.

- "Early Burials from the Nagpur District, Central India", *Man*, Vol. 5, No. 3, London, pp. 498 ff.
- Litvinsky, B. A. "India and Soviet Central Asia", *ICWTC*, Madras, 1970, pp. 263-274.
- Mackay, E. "A Sumerian Palace and the 'A' cemetery at Kish Mesopotamia II", *Anthropology Memoirs*, Vol. I, Field Museum, Chicago, 1929.
- "Further links between Sind, Sumer and elsewhere", *Antiquity*, Vol. V, England, 1931.
- "Report on Excavations at Jemdet Nasr (Iraq)", *Anthropological Memoirs*, Vol. I, No. 3, Field Museum, Chicago, 1931.
- Majumdar, N. G. "Explorations in Sind", *MASI*, No. 48, Delhi, 1934.
- Majumdar, R. C. "Achaemenian Rule in India", *IHQ*, Vol. 25, Calcutta, 1949.
- "India and Ceylon", *Indo-Asian Culture*, Vol. I, New Delhi, 1952-53.
- Malhotra, S. L. "Commercial Rivalry in the Indian Ocean in Ancient Times", *JASB*, Vol. 33, NS, London, 1958.
- Mallowan, M. "The Mechanism of Ancient Trade in Western Asia", *Iran*, Vol. III, America, 1955, pp. 1-9.
- Mallowan, M. E. L. and Rose, J. C. "Excavations at Tell Chagar Bazar", *Iraq*, Vol. III, London, 1936.
- Marshall, J. "Archaeological Exploration in India, 1906-7", *JRAS*, London, 1907.
- Misra, V. D. "Origin and Antiquity of the Painted Grey Ware", *University of Allahabad Studies*, Vol. 2, (N. S.) No. 1, Allahabad, Jan. 1970.
- Misra, V. N. "Cultural Significance of three copper Arrow-heads from Rajasthan, India", *JNES.*, Vol. XXIX, No. 4, 1970, pp. 221-32.
- "Twenty-five years of Indian Prehistory (1947-1972): A Review of Research", *Man and Society*, Lucknow, 1973.
- Mitra, A. K. "Origin of the Bell Capital", *IHQ*, Vol. VII, Calcutta, 1931.
- Mitra, P. "Prehistoric Trade Routes and Commerce", *IC*, Vol. II, Calcutta, 1935-36.
- Modi, J. J. "India in the Avesta", *Asiatic Papers*, Pt. II.
- Mohapatra, G. C. "Preliminary Report of the Exploration and Excavation of Stone Age Sites in Eastern Punjab", *BDCRI*, No. 25, 1966, Poona, pp. 221-237.

- Moti Chandra "The Mother Goddess", *Bulletin of the Prince of Wales Museum*, Bombay, 1973, pp. 4-6.
- Movius, H. L. "Early Man and Pleistocene stratigraphy in Southern and Eastern Asia", *Papers of Peabody Museum of Archaeology and Ethnology*, Vol. 19, Cambridge, 1944.
- "Palaeolithic and Mesolithic Sites in Soviet Central Asia", *PAPS*, Vol. 97, Philadelphia, 1953.
- "A summary of excavations and explorations in Pakistan c. 1971 and 1972", *Pakistan Archaeology*, No. 8, Karachi, 1972.
- Mughal, M. R. "New Evidence of the Early Harappa Culture from Jalilpur, Pakisian", *Archaeology*, Vol. 27, No. 2, 1974, pp. 106-113.
- Murray, M. L. K. "Blade and Burin industries near Renigunta on the South east Coast of India", *PPS*, vol. 28, Cambridge, 1969.
- Nagarajarao, M. S. "Ancient Links between India and Africa", *Sunday Standard*, Jan. 5, 1975, Magazine Section P. I.
- Nigam, J. S. "The Chalcolithic Dancers of India", *JBRs*, Vol. XLIX, Patna, 1963.
- "Human Motifs on the Chalcolithic Black-on-Red Ware", *Bharati*, No. 9, Part I, Varanasi, 1965-66.
- Oakley, K. P., Oldenburg, H., Keith, A. B. and Sayce, A. H. "Tools Makyth Man", *Antiquity*, Vol. 31, London, 1957.
- Oppenheim, A. L. "On the Antiquity of Vedic Culture", *JRAS*, London, 1909, p. 1095-1107.
- Paddayya, K. "The Sea Faring Merchants of Ur", *JAOS*, Vol. LXXIV, New Haven, 1954.
- Panchamukhi, R. S. "Radiocarbon dates and the South Indian Neolithic Culture", *Antiquity*, Vol. XLV, London, 1971, pp. 134-38.
- Pande, B. M. "Dolmens and Cairns of Karnataka", *JBU*, Vol. XIV. Pt. 4, (1945-46), pp. 10-28.
- "Indian Religions and the West", *ICWTC*, Madras, 1970, pp. 615-22.
- Peder Mortensen "Harappan Ring-Kernoi : A Study", *East and West (NS)*, Vol. 21, Nos. 3-4, Rome, 1971.
- Pentti Aalto "On the Date of the Temple at Barbar in Bahrain", *Kuml*, Denmark, 1971, pp. 393-398.
- Philip, L. Kohl "On the Role of Central Asia in the spread of Indian Cultural Influence", *ICWTC*, Madras, 1970, pp. 249-262.
- "Carved Chlorite Vessels : A trade in Finished commodities in the Mid-Millennium", *Expedition*, Vol. 18, No. 1, 1875, pp. 18-31.

- Piggott, S.  
—  
—  
—  
Prasad, Amba  
Puglisi, S.M.  
Puri, B.N.  
Pusalker, A.D.  
Raikes, R.L.  
—  
Raikes, R.L. and Dyson  
Ramachandran, K.S.  
—  
—  
—  
Ramachandran, T.N.  
Ranov, V.A.  
—  
—
- “Dating the Hissar Sequence the Indian Evidence”, *Antiquity*, Vol. XVII, No. 68, London, 1943, pp. 169-182.  
 “The Chronology of Prehistoric North-west India”, *AI*, New Delhi, 1946, pp. No. 1.  
 “A New Prehistoric Ceramic from Baluchistan”, *AI*, No. 3 New Delhi, 1947, pp. 131-142.  
 “Notes on certain metal Pins and a Mace-head in Harappan Culture”, *AI*, No. 4, New Delhi, 1947-48.  
 “India's Contacts with Africa from the earliest Times”, *ICWTC*, Madras, 1970, pp. 601-603.  
 “Preliminary Report on the Researches at Hazar Sum”, *East & West*, Vol. 14, No. 1-2, Rome, 1963.  
 “Indian Religion and Philosophy as known to Greek History”, *PIHC*, Allahabad, 1938, 2nd Session.  
 “Cultural Interrelation between India and the outside World”, *Cultural Heritage of India*, Vol. I, Calcutta, 1958.  
 “New Prehistoric Bichrome Ware from the plains of Baluchistan”, *East and West*, NS, Vol. 14, Rome, 1963.  
 “Archaeological Explorations in Southern Jhalawan and Las Bela”, *Origini*, Vol. 2, Rome, 1968, pp. 103-171.  
 “The Prehistoric climate of Baluchistan and the Indus Valley”, *American Anthropologist*, Vol. 63, No. 2, 1961, pp. 265-281.  
 “Megalithic Rock-cut Caves and their parallels outside India”, *SPPMI*, Varanasi, 1969, pp. 59-65.  
 “Chronology of Indian Megaliths : Some considerations”, *Puratattva*, No. 3, New Delhi, 1969-70, pp. 107-09.  
 “Ancient Indian Maritime Ventures”, *ICWTC*, Madras, 1970, pp. 71-82.  
 “Gulf of Oman : Original Home of the Indian Megaliths, a Reappraisal”, *Puratattva*, No. 6, New Delhi, 1972-73, pp. 20-26.  
 “Buddhist India and the Rest of the World”, *Journal of the Andhra Hist. Soc.*, Vol. XVIII, Hyderabad, 1947-48.  
 “On the Relations Between the Palaeolithic Cultures of Central Asia and some Oriental Countries”, VIIth International Congress of Anthropological and Ethnological Science, Moscow, 1964.  
 “Pebble Tools and their Role in the Palaeoliths of Central Asia”, *Report and Information Archaeology, USSR*, Moscow, 1966.

- Rao, S. R. "Orinithology in Protohistoric Archaeology of India", *Purataattra*, No. 6, New Delhi, pp. 56-58.
- "Lothal and West Asia", *Proceedings of the International Conference on Asian Archaeology*, New Delhi, 1961.
- "Excavations at Rangapur and other explorations in Gujarat", *AI*, Nos. 18-19, New Delhi, 1962-63.
- "A Persian Gulf Seal from Lothal", *Antiquity*, Vol. XXXVII, No. 146, London, 1963.
- "Shipping and Maritime Trade of the Indus People", *Expedition*, Vol. 7, No. 3, Philadelphia 1965.
- "Excavations at Amreli", *Bulletin of Museum, and Picture Gallery*, Baroda, Vol. XXVIII, Baroda, 1966.
- "Shipping in Ancient India", *ICWTC*, Madras, 1970, pp. 88-90.
- Rapson, E. "Counter-marks on early Persian and Indian Coins", *JRAS*, 1895, London.
- Rawlinson, H.G. "Foreign Influences in the Civilization of Ancient India", *JBBRAS*, Vol. 23, Bombay 1914.
- Reddy, K.T. "Vemula Industry in Cuddapah Basin", *Indian Antiquary*, Vol. 4, England, 1970.
- Richard Meadow H, et el. "Problems in the Culture History of Baluchistan and South-eastern Iran", *Cyclostyled copy*.
- Rivet Carnac, J.H. "Prehistoric Remains in Central India", *JASB*, Vol. XLVIII, Pt. I, 1879, pp. 1-16.
- Ross, E.J. "A chalcolithic site in North Baluchistan", *JNES*, Vol. 5, Chicago, 1946.
- Sahu, N.K. "Cultural Relations of Kalinga with South India and Ceylon", *OHRJ*, Vol. III, No. 4, Orissa, 1954-55.
- Sankalia, H.D. "Spouted vessels from Navdatoli and Iran", *Antiquity*, Vol. XXIX, London, 1955.
- "Navdatoli Dancers", *Antiquity*, Vol. XXI, London, 1955.
- "Cultural outpost of India", *The March of India*, Vol. VIII, No. 5, Delhi, 1956, pp. 24-28.
- "New Light on the Indo-Iranian or Western Asiatic Relations between 1700 B.C.—1200 B.C.", *Artibus Asiae*, Vol. XXVI, Ascona, 1963, pp. 312-332.
- "The Ur (Original) Ramayana or Archaeology and the Ramayana", *Indologentagung*, Berlin, 1971, pp. 156-159.
- "The Cemetery 'H' Culture", *Purataattra*, No. 6, Delhi, 1972-73 pp. 12-19.
- "Review of *The City in Early Historical India*", *Purataattra*, No. 7, New Delhi, 1974, pp. 108-110.

- "Iranian Influence on Early Indo-Pakistan Cultures", *Central Asia*, New Delhi, 1970.
- Sarkar, H. "Megalithic Monuments of the Lower Krishna Basin", *SPPMI*, Varanasi, 1969, pp. 12-26.
- "Buddhist Contact of China", *ICWTC*, Madras, 1970, pp. 324-332.
- Sastri, K.N. "The Beginning of Intercourse Between India and China", *IHQ*, Vol. 14, Calcutta, 1938.
- "New light on the Indus Civilization and Early contacts with Iraq and Iran", *Paper read at the International Conference on Asian Archaeology*, New Delhi, 1961.
- Satya Prakash "Indo-Persian Relation in Ancient India", *Modern Review*, Vol. 84, Calcutta, 1940.
- Saxena, K. K. "Ancient contacts between India and countries across the Arabian Sea", *Indo-Asian Culture*, Vol. XV, No. 1, New Delhi, 1966.
- Sen, A.C. "Aśoka's Foreign Policy", *PIHC*, Vol. XI, Delhi, 1948.
- "Aśokan Art", *Indo Asian Culture*, Vol. 4, 1955-56, New Delhi.
- "Ancient India and East and South-East Asia", *Indo-Asian Culture*, Vol. II, No. 1, New Delhi, 1958.
- Sen, D. "Nalagarh Palaeolithic Culture", *Man in India*, Vol. 35, No. 3, Ranchi, 1955.
- Sen D. and Ghosh A.K. "Lithic Culture-Complex in the Pleistocene Sequence of the Narmada Valley, Central India", *Rivista Di Scienze Preistoriche*, Vol. 18, 1963.
- Senart "The Inscription of Piyadasi", *I. Ant.*, Vol. XX, London, 1933.
- Sengupta, R. "Iconography of certain Varahi Images", *Bulletin of the Museum and Archaeology* in U. P., No. 7.
- Seth, H.C. "Central Asiatic Provinces of the Mauryan Empire", *IHQ*, Vol. XIII, Calcutta, 1937, p. 400 ff.
- "The Kingdom of Khotan under the Mauryas", *IHQ*, Vol. XV, Calcutta, 1939.
- Sharma, A.K. "Evidence of Horse from the Harappan Settlement at Surkotada", *Puratāntara*, No. 7, New Delhi, pp. 75-76.
- Sharma, G. R. "New Light on the origin of stone Architecture and true Arch in India", *Proceedings of the 26th International Congress of Orientalists*, New Delhi, 1966.
- "India and Central Asia from c. 6th century B.C. to 6th century A.D.", *Central Asia*, New Delhi, 1970, pp. 110-120.
- "Mesolithic Lake Cultures in the Ganga Valley, India", *PPS*, Vol. 39, Cambridge, 1973.

- Singh, P. "Megalithic Remains in the Aravallis", *Puratattva*, No. 2, New Delhi, (1968-69), pp. 46-48.
- Singh, S. "The Theory of the Aryan Association of the Painted Grey Ware : An Analysis", *Paper read at the Seminar on Painted Grey Ware, Aligarh Muslim University, Aligarh*, 1968.
- "Archaeological Evidence on the Pluralistic Make-up of the Aryan Culture-Complex", *Paper read at the All India Oriental Conference*, Varanasi, October, 1968.
- Sinha B.P. "Rise and Fall of the Indus Valley Civilization in the light of West Asiatic Archaeological Discoveries," *JBRS*, vol. 46, Patna, 1960
- "The Bearing of Recent Archaeological Discoveries on Proto Indian History", *JBRS* vol. 46, Patna, 1960
- Sircar, D.C. "Yavana and Parsika", *Journal of Indian History*, Vol. 14, Madras, 1935, pp. 35-36.
- Sircar, D.S. "Entry of Buddhism", *Mahabodhi*, Vol. 50, 1942.
- Smith, V.A. "Asoka Notes", *Indian Antiquary*, Vol. 34, 1905.
- Soundara Rajan "Megaliths and Black-and-Red Ware", *SPPMI*, Varanasi, 1969, pp. 69-89.
- Speiser, E.A. "The Pottery of Tell Billa", *Museum Journal University, Philadelphia*, Vol. XXIII, 1933.
- Spooner, D.B. "The Zoroastrian Period of Indian History", *JRAS*, 1915, London.
- "Mr. Ratan Tata's Excavations at Pataliputra", *ASIAR*, 1912-13, Calcutta, 1916.
- Srinivasan, K.R. "Survey of South Indian Megaliths", *AI*, No. 9, New Delhi, 1953, pp. 108 ff.
- and Banerjee, N.R. "Hinduism in Ceylon", *ICWTC*, Madras, 1970.
- Srivastava, R. "Discovery of four Pre-Buddhist Cemeteries near Pacha in Buner (SWAT, West Pakistan)", *East and West*, Vol. XVII, Rome 1962, pp. 220 ff.
- Stacul, G. "An Archaeological Tour in Waziristan and Northern Baluchistan". *MASI*, No. 37, Calcutta, 1929.
- Stein, A. "An Archaeological Tour in Gedrosia", *MASI*, No. 43, Calcutta, 1931.
- "An Archaeological Tour in the Ancient Persis", *Iraq*, No. 3, London, 1936.
- Sten-Konow, "Indo-European Religious Ideas in Ancient India", *ABORI*, VI, Part II, Poona, 1925.
- Subbarao, B. "The Chalcolithic Blade Industry of Maheshwar and a Note on the History of the Technique", *BDCRI*, Vol. 17, No. 2, 1955, pp. 126-147.

- Tai Chi tao "The Cultural Relationship of India and China", *Mahabodhi*, Vol. 50, 1942.
- Taraporewala, I. J. S. "Some Vedic Words viewed in the light of the Gathas and other Avesta Texts", *JBBRAS*, Vol. 26, Pt. II, Bombay, 1951.
- Thapar, B. K. "Maski 1954 : A chalcolithic site of the Southern Deccan", *AI*, No. 13, New Delhi, 1957, pp. 40 ff.
- "Neolithic Problem in India", *Indian Prehistory : 1964*, Poona, 1965 pp. 91-99.
- "Prakash 1955 : A chalcolithic site in the Tapti Valley", *AI*, No. 20-21, New Delhi, 1964-65.
- "Relationship of the Indian chalcolithic cultures with West Asia", *Indian Prehistory : 1964*, Poona, 1965.
- "The Aryans : A Reappraisal of the Problems", *ICWTC*, Madras, 1970.
- Thorvildsen, K. "Burial Cairns on Umm-an-Mar", *Kuml*, 1962, Denmark, 1963, pp. 208-219.
- Tilak, B. G. "Chaldean and Indian Vedas", *R. G. Bhandarkar Commemoration Volume*, Poona, 1917.
- Trivedi, H. V. "Excavations at Avra", *Journ. of the Madhya Pradesh Itihas Parishad*, No. IV, Bhopal, 1962.
- Tosi, M. "Excavations at Shahr-i-Sokhta", *East and West*, Vol. XIX, Rome, 1968, pp. 283-286.
- "Dilmun", *Antiquity*, Vol. XLV, London, 1971, pp. 21-25.
- Umberto, Scerrto, "An Inscription of Asoka discovered in Afghanistan : the bilingual Greek Aramaic of Kandhara", *East and West*, Vol. 9, Rome, 1958.
- Unvala, J. M. "Political and Cultural Relations between Iran and India", *ABORI*, Vol. XXVIII, Poona, 1947.
- Vader, V. H. "Situation of Ravana Lanka : on the Equator", *IHQ*, Vol. II, Calcutta, 1926, pp. 345-353.
- Verma, B. S. "Excavations at Chirand", *Puratattva*, No. 4, New Delhi, (1970-71), pp. 18-22.
- Vidyabhushan "Vratya and Samkara theories of Caste", *JASB*, Vol. LXXI, part I, Calcutta, 1902, pp. 149-174.
- "Influence of Aristotle on the Development of the Syllogism in Indian Logic", *JRAS*, 1918, London.
- Woolley, C. L. "The Excavations at Ur, 1925-26", *Antiquaries Journal*, Vol. VI, No. 4, London, 1926, pp. 365-401.
- "Excavations at Ur, 1926-27", *Antiquaries Journal*, Vol. VIII, London, 1928.
- "Excavations at Ur, 1929-30", *Antiquaries Journal*, Vol. X, London, 1930, pp. 331-389.

- Welkar, M. "The Painted Pottery of the Near East in the 2nd millennium B. C. and its Archaeological background", *Transactions of the American Philosophical Society*, N. S., Vol. 38, 2 (1948).
- Wheeler, R. E. M. "Harappa 1946—The defence and cemetery R-37," *AI*, No. 3, New Delhi, 1947.
- "Brahmagiri and Chandravalli 1947; Megalithic and other cultures in Mysore State", *AI*, No. 4, New Delhi, 1947, pp. 181-308.
- "Iran and India in Pre-Islamic Times", *AI*, No. 4, New Delhi, 1947-48, pp. 41-84.
- Winternitz, M. "Surunga and the Kautilya Arthaśāstra", *IHQ*. Vol. I, Calcutta, 1925.
- Yeh, K. C. G. "India and China", *Asiatic Review*, Vol. 38, N. S., Calcutta, 1942,
- Zurcher, E. "The Buddhist Conquest of China. The spread and Adaptation of Buddhist in Early China", *Sinica Liedensia*, Vol. XI, pp. 20-35.

### TEXTS

- Aitreya Brāhmaṇa* ed. and trans. by Martin Haug, Vol. 2, Allahabad, 1922.
- Aṅguttar Nikāya* ed. by Prof. E. Hardy, London, 1896.
- Arthaśāstra* (Kautilya) ed. and trans. by R. Shama Sastri, Mysore, 1909, 1923.
- Ashtādyāyi (Pāṇini)* ed. and trans. by Late Srish Chandra Vasu, Delhi, 1962.
- Atharvaveda*—ed. by Sayan Bhashy, Moradabad, Satīvat 1986.
- Dīghanikāya*—ed. by Max Müller and trans. by Rhys Davids, Sacred Book of the Buddhist, Vol. 2, London, 1899.
- Divyārdāna*—ed. by Dr. P. L. Vaidya, Dharbhanga, 1959.
- Jātaka*—ed. by Fousböll, London, 1877-97 translated and ed. by E. B. Cowell, Cambridge, 1895-1913.  
trans. by Bhadant Ananda Kauslayan Prayag, 1942-46.
- Hultzsch—*Corpus Inscriptionum Indicarum*, Vol. I, Inscriptions of Aśoka, N. E. Oxford, 1925.
- Mahābhārata*—Critical Edition :  
I. Adiparvan ed. by V. S. Sukthankar, Poona, 1927-33.  
II. Sabhaparvan, ed. by P. Edgerton, Poona, 1943-44.  
Calcutta ed.—ed. by N. Siromani and others BI, Calcutta, 1834-39.
- Mahāvastu*, trans. by J. J. Jonko, Sacred Book of the Buddhist, Vol. XVI, London, 1949.
- Rāmāyaṇa* (cf Valmiki) Trans. by Hari Prasad Shastri, Vol. 3, London, 1951.
- Rigveda Samhitā*, Pub. by Vedic Sansodhan Mandal of Tilak Maharashtra, Vida-peeth, Poona, Vol. I, 1935, Vol. II, 1936, Vol. III 1941.

*Sāmanta Pāśādika I*, ed. by Birbal Sharma, Vol. I, Patna, 1964.

*Saṃyutta Nikāya*, ed. by Leon, Freer, PTS, London, 1884-98.

*Śatpatha Brāhmaṇa*—trans. by Julius Eggling, *The sacred Books of the East*, ed. by Max Müller, Vol. XII, Part 5, Patna, Delhi, Varanasi, 1963.

*Theragāthā*, ed. by Hermann Oldenberg and Richard Pischel, London, 1883.

## FOREIGN SOURCES

- |                              |  |
|------------------------------|--|
| Beal, S.                     | <i>Si-Yu-Ki, Buddhist Record of the Western World</i> , Vol. I and II, London and Boston, 1884 and 1885.                                     |
| Geiger, W. (ed.)             | <i>Mahavamīsa</i> , London, 1908.  |
| Giles                        | <i>The Travels of Fa-Hsien</i> , London, 1959.   |
| Law, B.C. (ed.)              | <i>Dipavamīsa</i> , The Ceylon Historical Journal, Vol. VII, July, 1957 to April 1958, No. 1-4, First ed., 1959.                             |
| Majumdar, R.C.               | <i>Classical Account of India</i> , Calcutta, 1960.  |
| —                            | <i>Ancient India as described by Megasthenes and Arrian</i> , Calcutta, 1960.  |
| McCrindle, J.W.              | “Ancient India as described by Ktesias”, <i>Indian Antiquary</i> , Vol. X, 1881, London, pp. 296-321.  |
| —                            | <i>Ancient India as described by Ktesias the Knidian</i> , Calcutta, 1882.   |
| —                            | <i>The Invasion of India by Alexander the Great</i> as described by Arrian, Diodoras, Plutarch and Justian, West Minister, 1896.             |
| —                            | <i>Ancient India as described in classical literature</i> , West Minister, 1901.   |
| —                            | <i>Ancient India as described by Megasthenes and Arrian</i> , N.E. Calcutta, 1926.   |
| Mesteter, J.D. (trs.)        | <i>Zend-Aresta</i> , Parts I, II, III, Oxford, 1880; <i>Sacred Books of the East</i> , ed. by Max Müller, Vols. IV, XXIII (1883) XXXI, 1887. |
| Miller, W.<br>(ed. & trs.)   | Xenophen's <i>Cyropaedia</i> , London, New York, 1914.   |
| Rawlinson, G.                | <i>The History of Herodotus</i> , Vol. I and II, London, New York, 1909-1910.  |
| Schoff, W. H. (trs.)         | <i>Periplus of the Erythrean Sea</i> , New York, 1912.   |
| Thera, Sobhita (ed.)         | <i>Mahābodhvamīsa</i> , Colombo, 1890.   |
| Thomas, F.W.                 | <i>Tibetan Literary Texts and Documents Concerning Chinese Turkestan</i> , I, London, 1935.  |
| Watson, J.S.<br>(ed. & trs.) | <i>The Anabasis or Expedition of Cyrus and Memorabilia of Socrates</i> , translated from the Greek Xenophon, London, 1887.                   |

## LIST OF RESEARCH JOURNALS AND PERIODICALS

- American Anthropologist, Chicago.
- Ancient India, New Delhi.
- Ancient Pakistan, Peshawar.
- Andhra Pradesh Government Archaeological Series, Hyderabad.
- Annals of Bhandarkar Oriental Research Institute, Poona.
- Annual Bibliography of Indian Archaeology, Kern Institute, Leiden.
- The Anthropologist, Delhi.
- Anthropology Memoirs, Chicago.
- Anthropology Papers of American Museum of Natural History, New York.
- Antiquity, London.
- Antiquaries Journal, London.
- Archaeology, New York.
- Archaeological Survey of India : Annual Report, New Delhi.
- Artibus Asiae, Ascona Switzerland.
- Bhāratī, Varanasi.
- British Institute of Archaeology, London.
- Bulletin of the Deccan College Research Institute, Poona.
- Bulletin of the Directorate of Archaeology, West Bengal.
- Bulletin of the Museum of Far Eastern Antiquities, Stockholm.
- Bulletin of the Prince of Wales Museum, Bombay.
- Bulletin of the School of Oriental and African Studies, London.
- Burlington Magazine, London
- Cultural Forum, New Delhi.
- Cultural Heritage of India, Calcutta.
- Current Science, Bangalore.
- East and West, Rome,
- Expedition, Philadelphia, Pennsylvania.
- Illustrated London News, London.
- Indian Antiquary, London.
- Indian Archaeology : A Review, New Delhi
- Indian Culture, Calcutta.
- Indian Historical Quarterly, Calcutta.
- Indo-Asian Culture, New Delhi.
- Iran, U.S.A.
- Iraq, London.
- Journal of the American Oriental Society, New Haven.
- Journal of Asiatic Society Bengal.
- Journal of Bihar Research Society, Patna.

- Journal of Bihar and Orissa Research Society, Patna.  
Journal of Bombay Branch, Royal Asiatic Society, Bombay.  
Journal of Field Archaeology, Chicago U.S.A.  
Journal of Greater India Society, Calcutta.  
Journal of Near Eastern Studies, Chicago.  
Journal of Numismatic Society of India, Varanasi.  
Journal of the Oriental Institute, Baroda.  
Journal of Royal Asiatic Society Bengal (Letters), Calcutta.  
Journal of Royal Asiatic Society Great Britain & Ireland, London.  
Journal of Sind Historical Society, Karachi.  
Journal of the University of Gauhati.  
Journal of Uttar Pradesh Historical Society, Lucknow.  
Journal of the Washington Academy of Sciences.  
Kuml, Denmark.  
The Mahabodhi, Calcutta.  
Man, London.  
Man in India, Ranchi.  
The March of India, Delhi.  
Memoirs of Archaeological Survey of India, Calcutta.  
Modern Review, Calcutta.  
New Indian Antiquary, Bombay.  
Oriental Institute of Chicago Communications, Chicago.  
Pakistan Archaeology, Karachi.  
Proceedings of British Academy, London.  
Proceedings of Indian History Congress.  
Puratattva, New Delhi.  
Sino-Indian Studies, Calcutta.  
Visheshwarānanda Indological Journal, Hoshiarpur.

# INDEX

## A

- Abacus, 193, 197  
Abbevilian, 7  
Abhidhamma, 208  
Abhisār, 179  
Abysinia, 108  
Abyssinian trader, 165  
Acanthus leaves, 197  
Achaemenid, people 5, 171, 201, 210, 211, edict 200, hall, 194 rule, 200 empire, 168, 169, 170, 172, 179, 191, 198, 213, 214, 224  
Acheulian, 7, 8  
Adab, 34  
Adamgarh, 12  
Adichanlur, 106  
Aditi, 126  
Adze, 72, 77, 79, 165, 221  
Adze-axe, 224  
    handadze, 9  
    shaft-holed adze-axe, 81  
Aegean Sea, 60, 69  
Afghan, 26, 32, 153  
Afghanistan, 4, 10, 12, 15, 16, 17, 18, 19, 24, 25, 27, 36, 55, 56, 65, 90, 102, 119, 137, 155, 160, 165, 179, 205, 220, 221, 224,  
Africa, 6, 7, 8, 9, 78, 146, 147, 148, 219, 220  
Agrawal, D.P., 91  
Agrawal, V.S., 194, 196, 197  
Agni, 122, 125, 126  
Agnya, 129  
Ahar Culture, 71, 82, 104, 222  
Ahichchhatra, 91,  
Ahidasa, 129  
Ahmad Khanzai, 21  
Ahura Mazda, 124, 127  
Ahur Mitra, 125  
Aimāka, 160  
Airāvatvarṣa, 145  
Airyaman, 127  
Airyanavaejo, 117  
Ajanta, 209  
Ajatasatru, 198  
Ajay Valley, 75  
Ajios, 113  
Ājīvika, 177, 178  
Akkadian, 40, 43, 44, 66, 130, 131, 222,  
Aksapada, 184  
Alabaster objects, 20, 21, 23  
Alalu, 130  
Ālāy-Balāy, 130  
Alamgirpur, 37, 38, 91  
Alberuni, 142  
Alexander, 5, 163, 170, 171, 179, 180, 181, 185, 186, 190, 194, 202, 204, 210, 217, 224, 225  
Alexander of Epirus, 203  
Alexandria, 153, 157, 180, 184, 190  
Algeria, 108  
Al Hamli, 111  
Ālīgi, 130  
Alikasundara, 203  
Alinas, 119  
Allah Dino, 38  
Allchin, F.R., 20, 35, 76, 78, 103, 110, 111, 134, 223  
Alm-bowl, 209  
Almug, 166  
Alpin, 135  
Altin Depe, 58, 60, 68, 69, 70, 222  
Al' Ubaid, 23, 28, 43-44, 45, 47, 49, 59, 97, 98, 99  
Amarkantaka, 140  
Āmbhī, 179  
American, 67  
Amri, 15, 16, 17, 25, 26, 27, 30, 36, 95  
Amri-Nal Culture, 29, 30, 31, 32  
Amug plain, 89

- Amulet, 38, 54, 60, 65, 100, 101  
 Amur, 80  
 Anahita, 126  
 Anarta, 154  
 Anatolia 47, 64, 82, 89, 100, 101, 134, 135  
 Anau, 22, 23, 27, 28, 29, 48, 58, 60, 64, 68, 69, 82, 100, 101, 134  
 Anaximander, 182  
 Ancestor worship, 127, 128, 178, 212  
 Andarab, 145  
 Anjira, 18, 31, 32  
 Anklet, 60  
 Antākhī 150, 153  
 Antekin, 203  
 Antelope, 25, 52, 53, 85, 89, 101, 147  
 Antioch, 153, 157  
 Antiochus, 205  
 Antiochus I, 202  
 Antiochus II soter, 202  
 Antiochus II theos, 203  
 Antiochus III, 203  
 Antigone, 206  
 Antigonus Gonatas, 203  
 Antiyoka, 203, 205  
 Anula, 208  
 Anuradhapur 176, 208, 209, 210  
 Anyathian, 9  
 Apām Napāt, 126  
 Apara Goyāna, 164  
 Apatya, 129  
 Ape, 166, 167  
 Arabia, 8, 108, 109, 110, 111, 112, 146, 172, 180, 223  
 Arabic, 166  
 Arabian Sea, 39  
 Arachosia, 202  
 Arāgante, 180  
 Aramaic, inscription, etc., 170, 199, 200, 205, 213  
 Āraṇyaka, 140  
 Arbela, 170  
 Architecure, 1, 191, 192, 193, 202, 210  
 Arctic Home theory, 117  
 Arctic Ocean, 145  
 Ardvisūrā, 126  
 Arghandab, 19-20  
 Aria, 202  
 Arisi, 180  
 Aristotle, 184  
 Aristoxenos, 183  
 Ariṭṭha, 186, 207, 209  
 Arjuna, 150-151  
 Armaiti, 127  
 Armenoid, 103, 135  
 Armlet, 198  
 Army Physician, 205  
 Aronom, 179  
 Arrian, 159, 168, 170, 171, 187, 204  
 Arrowhead, 15, 24, 27, 50, 79, 80  
 Artaxerxes Mnemon, 170  
 Arthaśāstra, 155, 188, 190, 201, 215-216  
 Aryan, 5, 38, 63, 81, 92, 93, 94, 102, 103, 116, 117, 118, 121, 122, 132, 133, 134, 135, 136-137, 138, 223, Vedic, 116, 119, 121, 123, 128, 129, 130, 135, 184, 223  
 Āṣā, 122  
 Asafoctida, 155-56  
 Asakku-demon, 132  
 Asia Minor, 46, 54, 62, 63, 78, 79, 93, 95, 100, 101, 116, 117, 118, 134, 137, 194  
 Aśoka, 5, 178, 186, 187, 189, 192, 193, 195, 197, 199, 200, 203, 205, 207, 208, 209, 211, 213, 217, 218, 224  
 Asphalt Vase, 44  
 Assam, 217  
 Assyrian, 100, 102, 103, 167, 168, 172, 185, 197, 217  
 Astarte, 126  
 Aṣṭādhyāyī of Pānini, 181  
 Astronomy, 174, 190, 204, Babylonian, 204, Greek, 204, Hindu, 204  
 Astynomoi, 204  
 Asurbanipal, 168  
 Aśvapati, 147  
 Aśvins, 127  
 Atare, 125-126  
 Atharvaveda, 13, 94, 120, 126, 130, 132  
 Athens, 183, 205  
 Athenaeus, 189, 202  
 Atranjikhēra, 91  
 Aurignacian, 11  
 Aurora, 127  
 Aurora borealis, 146  
 Avesta, 121, 122, 124, 125, 126, 127, 128, 129, 136, 137  
 Awls, 11, 12, 76, 77

Axe, 49, 72, 73, 74, 75, 76, 77, 79, 80, 83, 87, 88, 105, 165  
 axe-adze, 49, 65, 135, hand-axe, 6, 7, 8, 9, 220  
 Honan axe, 73, shouldered axe, 22  
 Axis Mundi, 197  
 Ayasa, 94  
 Ayodhya, 148-149  
 Azi Dahaka, 129

## B

Babylonia, 24, 48, 51, 54, 57, 63, 118, 132, 133, 172, 173, 174, 185  
 Babylonian objects, empire, etc., 46, 62, 64, 125, 130, 131, 132, 167, 171, 173, 174, 204  
 Bacsonian, 74  
 Bactrian, 120, 158, 160, 168, 210, 214  
 Bactrian Camel, 167, 193  
 Badakshan, 27, 31, 56, 90, 145, 152, 157, 158  
 Bagchi, P.C., 3, 120, 152  
 Bagor, 12, 50  
 Bahawalpur, 102  
 Bählik, 120, 158  
 Bahrain, 20, 47, 52, 66, 67  
 Baidapur, 75  
 Bakun, 86, 89  
 Balakot, 32, 38, 51  
 Bali, 140  
 Balkh, 160, 167, 179, 210  
 Baltic region, 117  
 Baluchi, 35, 36, 43, 47, Cairns, 111  
 Baluchistan, 3, 4, 14, 15, 16, 17, 18, 19, 20, 24, 25, 26, 28, 29, 30, 31, 32, 33, 36, 38, 39, 42, 44, 56, 59, 65, 72, 79, 80, 96, 97, 98, 100, 102, 109, 112, 135, 137, 155, 168, 202, 221, 223, 224  
 Bampur, 33, 34, 67  
 Banasian Culture, 71, 82, 223  
 Band, 99  
 Banerjee, G.N., 206  
 Banerjee, N.R., 109, 110, 111, 223  
 Bangles, 25, 105, 199  
 Bankura, 75  
 Baran river, 29  
 Barabar Cave, 52, 192  
 Barbaricon, 166  
 Baresma, 125, 128  
 Bârisäl, 154  
 Barley island, 142  
 Bead, 31, 44, 55, 57, 59, 69, 70, 77, 82, 83, 99,

100, 101, 104, 197, 221, 222  
 Barrel-shaped faience, 59, carnelian, 57, 65, circular, 57 dentalium bead, 57, disc bead, 58, faience, 58, fly-shaped, 58, gold discoid, 57, lozenge-shaped faience, 59, lapis-lazuli, 20, 27, 31, 58, 90, onyx, 59, segmented, 57, 58, 59, 69, 101, sickle-blade, 58, steatite, 59, stone, 66, Beas, 147, 166, 179  
 Bebel-Mandeb, 166  
 Bed, 50  
 Bedsa, 193  
 Begram, 213  
 Behistun, 169, 199  
 Belalu, 130  
 Belan river valley, 11, 220  
 Bell, 105, 110, 196, 197  
 Berenice, 190  
 Bernhard, W., 135  
 Bhadra-Katyānyi, 177  
 Bhādraśva, 164  
 Bhadrāśvavarṣa, 145  
 Bhagadatta, 156  
 Bhagatrv, 38  
 Bhājā, 193  
 Bhalanas, 119  
 Bharat, 147  
 Bharhut, 193  
 Bhīma, 88, 150  
 Bhir mound, Taxila, 192, 199  
 Biddulph, 151  
 Bill-hook, 105  
 Bindusara, 186, 189, 202, 203  
 Birbhanpur, 12  
 Birbhum, 75  
 Bird, 33, 43, 54, 63, 103, 163, 173, 180  
 Birs Nirmud, 174  
 Biscione, R., 19, 24  
 Bitumen, 47, 56, 196  
 Bit Yakin, 167  
 Blade, 11, 15, 17, 20, 31, 74, 77, 88, 220, 221, backed, 12, 49, crested-ridge, 77-78  
 Blandford, 8  
 Blanket, 151  
 Boat, 38  
 Bodhi tree, 209  
 Boghaz-Koi, 93, 118, 127, 136, 223  
 Bokhara, 152, 155  
 Bolar range, 159

- Bone objects, etc., 20, 31, 47, 77, 79, 92, 103, 209, 216  
 Bongard-Levin, G.M., 3, 7  
 Borde, F. 7, 220  
 Bos-Indicus, 24  
 Bows & arrows, 61  
 Box, 221  
 Brahmagiri, 114  
 Brāhmaṇas, 119, 120, 177, 178, 182, 183, 207  
 Brahmanical works, 164  
 Brahmanism, 178  
 Brahmāṇḍa, 184  
 Brahmāṇḍa Purāṇa, 164  
 Brahmaputra, 146, 154  
 Brāhmī script, 168, 171, 200, 208  
 Broach, 184  
 Bronze Age, 108, 135, 214  
 Bronze objects, etc., 27, 49, 50, 65, 79, 81, 94, 105, 109, 135, 224  
 Buck, 28, 33  
 Bucket, 30  
 Buddha, 163, 176, 178, 209, 213, 214, 216, 223, 224  
 Buddha Prakash, 2, 142, 146, 148, 161  
 Buddhism, 164, 177, 178, 184, 203, 207, 208, 209, 210, 212, 213, 214, 216, 217  
 Buddhist, 217  
 Buddhist Council, First, 198, Third, 187, 208  
 Buddhist mission, 208  
 Buffalo, 53  
 Bull, 24, 33, 35, 48, 50, 51, 69, 70, 77, 78, 79, 89, 105, 128, 197, brahmā, 25, humped, 20, 28, 35, 44, 47, 54, short-horned, 47, 51, urus bull, 65  
 Bull-fight, 61, 62  
 Bull sacrifice, 62  
 Bullock-cart, 38  
 Burdwan, 75  
 Burial, 15, 32, 45, 110, 221, 223, jar, 103, dog, 80 double-pot, 222, human, 80, pot burial, 102, urn burial, 106, 174  
 Burins, 11, 12  
 Burma, 9, 72, 73, 74, 156, 215, 217, 220  
 Burzahom, 76, 79  
 Busasa, 172  
 Button, 100
- Cairn, 29, 109, 111, 112, 113, 114  
 Caldwell, Father, 180  
 Calicut, 113  
 Callimachus, 184  
 Cambodia, 74, 108  
 Camel, 151, 189, humped, 193  
 Can Hasan, 85-86  
 Cannanore, 113  
 Capital, pillar, 196-197  
 Cappadocia, 52, 118  
 Captivity, 174  
 Carchemish, 85  
 Carmanian desert, 167  
 Cart, 27, 68  
 Caryanda, 179  
 Casal, J.M., 14  
 Caspian Sea, 36, 117, 142, 143, 148, 161, 167  
 Caste system, 183  
 Catal Hüyük, 78, 84  
 Cattle, 21, 24, 28  
 Caucasus, 18, 48, 49, 60, 81, 87, 109, 110, 114, 136  
 Cedar, 174  
 Celt, 72, 73, 74, 75, 81, 83, bar, 76  
 Cemetery 'H', 102, 103, 104  
 Central Asia, 4, 5, 6, 8, 10, 12, 13, 15, 17, 22, 35, 36, 39, 41, 62, 65, 68, 69, 70, 72, 80, 81, 94, 109, 110, 111, 117, 120, 121, 134, 135, 136, 142, 143, 144, 145, 147, 148, 152, 155, 158, 159, 161, 186, 187, 193, 194, 199, 210, 211, 213, 214, 217, 220, 221, 223, 224  
 Ceylon, 140, 141, 160, 174, 175, 177, 178, 185, 207, 208  
 Ceylonese Chronicle, 164, 175, 178  
 Chagar Bazar, 63  
 Chah Husaini, 22  
 Chaitya, 209  
 Chakravartin, 213  
 Chalcolithic culture, 2, 4, 17, 35, 36, 71, 75, 83, 87, 223  
 Chaldean State, 167  
 Chalice, 105  
 Chambal, 83  
 Champā, 164  
 Champagne grave, 85  
 Chanda, R P., 195  
 Chandoli, 89, 90, 222  
 Chandragupta Maurya, 5, 186, 188, 190, 193, 201, 202, 205, 210

- Chanhu-daro, 37, 49, 57, 59, 60, 69, 94, 100,  
     102  
 Chariot, 33, 61, 118, 123, 125, 127, 151, 201  
 Charles Darwin, 219  
 Chashmah Ali, 20, 36, 86  
 Chatterjee, S.K., 206  
 Chauntra, 7  
 Che-Houang ti, 216, 217  
 Che-li-fang, 216  
 Chellean, 7  
 Chelles-Acheul, 7  
 Chenab, 160  
 Chess, 61  
 Chhalgarhi, 29  
 Childe, V.G., 38, 45, 57, 102  
 China, 9, 23, 72, 73, 74, 76, 79, 81, 142, 144,  
     156, 159, 164, 167, 186, 187, 214, 215, 218, 220,  
     221  
 Chinese objects, etc., 9, 154, 156, 210, 211, 212,  
     213, 214, 216, 221  
 Chira, 141  
 Chirand, 72, 76  
 Chirand-Sonepur Culture, 71  
 Chisel, 11, 72, 73, 75, 76, 77, 79, 90  
 Chitrakut, 140  
 Chitral State, 157  
 Chittor, 220  
 Chopper-Chopping, 6, 7, 8, 9, 80, 114, 214, 219,  
     220  
 Chota-Nagpur plateau, 140-141  
 Chou-Kou-tian, 9  
 Chullavagga, 198  
 Chunar sandstone, 195  
 Cinas, 150, 154, 155, 157, 159, 215,  
 Cinnamon, 165, 180  
 Circle, megalithic, 63, 69-70  
 Cist, buiral, 110, 114, 223  
 Citraka, 151, 157  
 Cittā, 178  
 City State, 181  
 Clark, J.G.D., 8  
 Cleavers, 6, 220  
 Cobras, 54  
 Cochin - China, 160  
 Coinage, 171, 201, 202, 205, daric, 170, 171,  
     decadrachm, 18, Greek coins, 180, 181, 205,  
     Persian coin, 170, 201, punch-marked coin 171,  
     Seleucid coin, 205, shekels 170, sigloi, 170, 202,  
     Colonization, 6, 26, 77, 175, 207, 212, 214  
     Comb, 66  
     Commercial, 1, 34, 36, 51, 55, 56, 70, 101, 119,  
         133, 137, 164, 168, 171, 173, 174, 180 187, 194,  
         204, 217, 221, 222, 225  
     Cone, 69  
     Copper objects, etc., 21, 27, 29, 31, 47, 48, 49,  
         50, 51, 55, 56, 65, 66, 69, 80, 81, 90, 94, 105,  
         110, 135, 196, 221, 224  
     Copper-Hoard, 71, 81, 82, 104, 148, 149, 223-  
         224  
     Copper tablet, 61  
     Corbelled arch, 40  
     Core, 80  
     Corinth, 203  
     Coronation, 207  
     Cotton, 165, 167, 168, 170  
     Court art, 193  
     Court life, 191  
     Cow, 126, 129, 151, 189  
     Crete, 23, 39, 46, 50, 51, 52, 56, 57, 60, 61, 62,  
         63, 65, 66, 76, 84, 85, 87, 100  
     Crocodile, 53  
     Cross, 63  
     Crow, 173  
     Cuneiform script, 4, 222  
     Cunningham, A., 147  
     Curtius, 145, 171  
     Cyclopean Wall, 192  
     Cyprus, 56, 62, 113, 168, 169  
     Cypriot grave, 113  
     Cyrene, 189
- D
- Dabar Kot, 16, 38, 55, 84  
 Dagger, 49, 69, 87, 90  
 Daimabad, 88, 89, 90  
 Daimachus of Platea, 202  
 Dales, G.F., 19, 20, 21  
 Damb Sadaat, 15, 17, 18, 21, 24, 36  
 Damin, 97  
 Dancing figure, 85, 86  
 Dancing girl, 60  
 Dani, A.H., 19, 20, 25, 26, 93-94, 136  
 Daniel, John M.B., 140  
 Danube basin, 117  
 Daradas, 150, 151  
 Darbha, 128

Darius, 167, 169, 198, 199  
 Darius I, 171, 172, 179, 194,  
 Darius III, 170-171  
 Das, A.C., 117  
 Das Gupta, P.C., 76  
 Dasht river, 34  
 Dasyus, 133  
 Dattamitra, 153  
 Davar, F.C., 3, 147, 148  
 Dawn, 122, 127  
 De-Cardi, B., 14, 17, 18, 31, 36,  
 Deer, 85, 89  
 Deh Morasi Ghundai, 15, 17, 21  
 Daluge, 131  
 Demeter, 126  
 Demon Lebasu, 132  
 Demonology, 131, 133, 137  
 Deojali Hading, 72, 74, 75  
 De-terra, H., and Paterson, T.T., 7  
 Devageha, 207  
 Devahuti, D., 193  
 Devakula, 178  
 Devānāpiya, 209  
 Devānāmpiya Tissa, 199, 207, 210  
 Devas, 123  
 Devasakhā, 139, 144, 161  
 Dey, N.L., 144, 146  
 Dhamma, 187, 189, 208, mission, 208, Vijay,  
     203, 224, Mahāmātras, 224  
 Dhauli, 192  
 Dhavalikar, M.K., 78, 104, 114  
 Diamond, 177, 214  
 Dice, 61, 65, cubical, 61  
 Didarganj Yakshi, 193  
 Digha Nikāya, 163  
 Digvijaya, 157  
 Dilmun, 66-67  
 Diodorus, 171  
 Dionysius, 186, 188  
 Dipavamīsa, 108  
 Dipi, 200  
 Diyala region, 33, 42, 45, 54, 55, 222  
 Djaitun Depe, 13, 17  
 Djamshidi, 103  
 Dockyard, 39  
 Dog, 48, 65, 79, 128, 173, 189  
 Dolmen, 113, 114,  
 Don, 161

Dove 62-63  
 Dragon, 143  
 Drain, 40-41  
 Drain-pipes, 41  
 Drama, 206  
 Drill, 49  
 Drishadvati Valley, 135  
 Druids, 109  
 Dupree, L., 18, 19  
 During Casper, E.C.L., 20, 34, 55  
 Durrani, F.A., 20  
 Dvarka, 152  
 Dvyaksas, 151, 158  
 Dyaus Pitar, 123

## E

Ea, 64  
 Eagle, 53, 54, 59, 180  
 Ear Ornament, 77, 105  
 Early Dynastic, 31, 33, 42  
 Early Historical Culture, 2, 4, 5, 163, 224  
 Earth goddess, 126  
 Ebony, 165  
 Ecbatana, 194, 195  
 Edict, 191  
 Egyptian objects, etc., 38, 39, 40, 43, 45, 46, 47,  
     48, 50, 52, 53, 54, 56, 57, 58, 59, 62, 63, 65, 66,  
     78, 79, 84, 90, 100, 126, 146, 148, 163, 165, 169,  
     170, 172, 180, 185, 186, 188, 189, 190, 191, 203,  
     217, 218, 224  
 Elam, 35, 38, 39, 43, 44, 45, 47, 48, 52, 53, 54,  
     59, 62, 63, 65, 96, 98, 101, 167  
 Eleatic School, 182  
 Elephant, 53, 90, 120, 165, 166, 167, 181, 192,  
     197, 201, 202, 205  
 Embassy, 169, 187, 188, 189, 190, 202, 203, 207,  
     208, 217  
 Embroidery, 171  
 Enault, J.F., 14  
 England, 108  
 Enkidu, 65  
 Enlil, 64  
 Envoy, 142, 144, 157, 176, 177, 202  
 Epirus, 189  
 Eshnunna, 41  
 Ethiopea, 148, 180  
 Euphrates, 38, 39, 56, 132  
 Eusebius. 183

Eziongeber, 166

## F

Fabri, Charles, 62  
 Fa-hien, 178, 209  
 Faience objects, 40, 47, 48, 51, 56, 101  
 Failka, 20, 47, 52  
 Fairseriss, W., Jr., 14, 18, 20, 25, 29, 36, 42,  
 Faiz, Mohammad, 29  
 Fergusson, J., 105  
 Fig, 202-203  
 Fillet, 60  
 Finger-ring, 148  
 Fire, 122  
 Fire god, 133  
 Fire Worship, 125  
 First Dynastic, 51  
 First Inter-glacial Pd, 219  
 Fish, 43, 51  
 Flake 219, 220  
 Flood, 131-132  
 Folk art, 193  
 Folklore, 215  
 Folk-tale, 173  
 Fort Munro, 81, 135, 224  
 Fossil, 11  
 France, 11, 108,  
 Frankfort, H., 40, 42,

## G

Gaj river, 29  
 Gajjar, I., 103  
 Gamesmen, 25, 61, 221  
 Game-board, 61  
 Ganas, 181  
 Gandhara Art, etc., 120, 155, 168, 169, 213  
 Gandhara Grave Culture, 93, 94, 134, 135, 136,  
     223  
 Gandhara region, 17, 71.94, 135, 222  
 Gandarii, 179  
 Gandharva, 130  
 Ganga Plain, etc., 8, 81, 91, 92, 102, 159  
 Garbe, 182  
 Garo Hills, 74  
 Gāthā, 127  
 Gāthā Vahishtaishti, 128  
 Gedrosia, 158, 168, 171-172, 202  
 Gees, 197

Gem, 214  
 Geometric pattern, etc., 89, 92, 174  
 Georgia, 108  
 Gooy Tepe, 82  
 Gereni, 160  
 Germany, 11, 108  
 Gezer, 113  
 Ghaggar, river, 102  
 Ghapada, 200  
 Ghar-e-Mar, 19  
 Ghazni, 156  
 Ghirshman, R., 145  
 Ghorband Valley, 160  
 Ghosh, A., 75, 111, 193  
 Gilgamesh, 64  
 Gilgit, 157  
 Gilund, 82  
 Gilyaka, 80  
 Giri, 178  
 Girjak, 147  
 Girnar, 153-154  
 Gissar, 80  
 Giyan, 22, 23, 28, 49, 88, 89  
 Glob, P.V., 20, 66, 114  
 Goalpara, 73  
 Goat, 24, 33, 48, 52, 96, 159  
 Goblet, 77, 201  
 Godavari, 9  
 Gold, 55, 59, 66, 77, 105, 145, 154, 166, 170, 171,  
     172, 199, 201, 216  
 Gold digging ants, 169, 180  
 Goodrich, C., 216  
 Goose, 182  
 Gordon, D.H., 25, 29, 36, 81, 91, 102, 109, 136  
 Goswami M. C., 74  
 Goyal, S.R., 200  
 Grāhi, 152,  
 Grand Trunk Road, 193, 194  
 Grape, 155,  
 Grave, 110, 114, 115, 136, Babylonian, 60  
 Grecian, 197  
 Greco-Bactrian State, 213  
 Greco-Indian, 224  
 Greco-Persian, 197  
 Greece, 50, 63, 65, 93, 100, 125, 179, 180, 181,  
     184, 185, 186, 205  
 Greek, 93, 105, 123, 124, 126, 127, 142, 147, 153,  
     157, 159, 160, 163, 164, 170, 179, 180, 183, 185,

- 186, 195, 197, 204, 205, 206, 210, 213, army, 185, cross, 63, dominion, 203, envoy, 203, god, 189, 191, historian, 190, Ionic, 198 invasion, 171, island, 45 letter, 171 mercenary, 169 monogram, 171 pantheon, 184 philosopher, 202, 303 provinces, 202 ruler, 187 scholar, 204 sea Captain, 179 settlement, 179 trader, 166  
**Grid-pattern (town planning),** 194  
**Griffen,** 199  
**Grinding stone,** 74, 75  
**Guard,** 201  
**Gudea,** 47  
**Guha, B.S.,** 103  
**Guild,** 176  
**Gujarat,** 112  
**Gulf of Cambay,** 39  
**Gulf of Oman,** 111  
**Gulf of Ormyz,** 171-172  
**Gumla Culture, Gumla Valley,** 15, 16, 17, 19, 25, 26, 35, 36, 38  
**Gupta, S.P.,** 19, 68, 78, 80, 81, 111, 112, 196, 220  
**Gutter,** 41
- H**
- Haimendorf, F.,** 109, 112, Haimavatas, 151, 159  
**Hajar Province,** 112  
**Halaf Culture,** 22  
**Hallur,** 76, 78  
**Hammer,** 73, 74, 76  
**Hammige,** 78  
**Han Dynasty,** 212  
**Hanuman,** 140, 148  
**Haptahidu,** 121, 136  
**Harahura,** 150, 155  
**Haraipur,** 75  
**Harappa,** 37, 42, 45, 47, 48, 49, 50, 51, 57, 58, 60, 61, 65, 70, 80, 89, 99, 102  
**Harappa Culture,** 2, 4, 30, 31, 38, 71, 90, 92, 95, 100, 102, 104, 148, 172, 174  
**Harappan,** 4, 19, 26, 36, 39, 64, 65, 66, 67, 78, 101, 104, 221, 222  
**Harmatta, J.,** 213  
**Harp,** 65  
**Harpoon,** 79, 81  
**Harvester,** 79, 221  
**Hastinapur,** 72, 91, 92, 93-94  
**Hastyāyurveda,** 205  
**Hazar Sum,** 10  
**Hea,** 133  
**Headgear,** 198  
**Head ornament,** 105  
**Head-rest,** 77, 78-79  
**Hebrew,** 166-167  
**Hegesander,** 202  
**Heine-Geldern, R.,** 81, 87, 101, 109  
**Hekataeus of Miletus,** 179  
**Helios,** 125, 184  
**Hellenic,** 181-182  
**Hellenistic,** 182, 202, 203, 204, 206, 210  
**Helmand Valley,** 160  
**Hem Chandra,** 155  
**Hemmige,** 88  
**Henri Maspero,** 215  
**Heraclitus,** 182  
**Herakles,** 124  
**Herat,** 155, 156, 202  
**Herodotus,** 168, 169, 173, 180  
**Hidu,** 169  
**Haimavanta,** 159,  
**Hindukush,** 121, 136, 151, 157, 159, 203, 223  
**Hippocratic treaties,** 185  
**Hippokleides,** 182  
**Hira Lal,** 140  
**Hissar,** 16, 21, 22, 25, 27, 28, 31, 36, 49, 80, 84, 85, 87, 88, 89, 90, 93, 101  
**Hittites,** 47, 64, 101, 117, 118, 134, 136  
**Hieun Tsang,** 143, 212, 214  
**Hiung-nu,** 156-157  
**Hodiwala, S.K.,** 126  
**Hoe,** 75, 79, 105  
**Holocene,** 12  
**Homer,** 126  
**Hominidae,** 219  
**Homo erectus,** 219  
**Homo habilis,** 7, 219  
**Honan,** 23, 74  
**Hone,** 50

Hook, 83  
 Hormuz, 56  
 Horse, 92, 110, 118, 125, 127, 151, 181, 201, 209  
 Hound, 173-174  
 House-urn, 34  
 Hüna, 150, 156-157  
 Hunting scene, 61  
 Hu-then, 212  
 Hvar-Khshaeta, 125

**I**

Ibex, 25, 33, 43, 166  
 Ice deluge, 117  
 Inamgaon, 58, 78, 88, 89, 222  
 Indian columns, 197, cotton, 167, muslin, 165,  
     teak, 174, women, 189  
 Indigo, 165  
 Indo-Aryan, 117  
 Indo-Caspian, 102, 103  
 Indo-China, 74  
 Indo-European, 117, 122, 123, 124, 125, 136  
 Indo-Gangetic, 134, 138-139, 223  
 Indo-Greek, 147, 148, 203  
 Indo-Iranian, 117, 125, 126, 127, 129, 222  
 Indo-Mongoloid, 154  
 Indonesia, 108, 147  
 Indo-Perso-Hellenic Art, 196  
 Indra, 118, 124, 130, 132, 136, 153, 184  
 Indrajit, 140  
 Indraprastha, 150  
 Ingot, 50, 55, 65  
 Interglacial, 7  
 Iran, 4, 5, 8, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25,  
     26, 28, 29, 30, 35, 36, 38, 39, 42, 44, 45, 49, 50,  
     55, 56, 57, 60, 63, 65, 67, 72, 77, 79, 80, 81, 85,  
     87, 88, 89, 90, 93, 94, 96, 97, 98, 99, 100, 110,  
     111, 112, 114, 116, 120, 121, 134, 136, 137, 147,  
     148, 185, 186, 191, 192, 194, 198, 199, 201, 210,  
     221, 222, 223, 224  
 Iranian, 14, 16, 17, 20, 24, 31, 41, 42, 43, 44, 83,  
     84, 85, 86, 87, 90, 95, 96, 97, 102, 104, 120, 121,  
     124, 128, 136, 137, 146, 147, 154, 160, 169, 170,  
     171, 191, 192, 193, 194, 197, 198, 199, 200, 201,  
     202, 210, 221, 224  
 Irano-Greek, 202  
 Iraq, 13, 18, 22, 24, 25, 35, 118  
 Iron, 91, 105, 110, 170, 172  
 Iron Age, 49, 94, 108, 111, 113, 223

Irrawaddy, 145  
 Irwin, J., 191, 195, 196, 197  
 Isakhel, 56  
 Ishkashm, 145  
 Ishtar, 64, 126  
 Isis, 126  
 Ismailabad, 83  
 Israel, 166  
 Italy, 108  
 Italian, 67  
 Ivory, 65, 66, 69, 70, 78, 165, 166, 172, 190

**J**

Jabalpur, 141  
 Jacobi, H., 138  
 Jade, 56  
 Jadeite, 73, 74  
 Jagjai, 22  
 Jagor, Capt. 106  
 Jains, 164, 177, 178, 207  
 Jakavos, 113  
 Jalalpur, 147,  
 Jalilpur, 15  
 Jalodsāgar, 139, 142  
 Jambūdvipa, 164, 165  
 Jambūkola, 207  
 Jamdat Nasr, 23, 31, 41, 42, 45, 57, 59, 61, 90,  
     96, 101  
 Janpada, 181  
 Japan, 108  
 Jarmo, 13, 77  
 Jarrige, .F., 14,  
 Jātaka, 163, 164, 177, 182, Baueru, 173, Maho-  
     shadha, 174, 182, Uchchhang, 182, Valahassa,  
     175, 177  
 Java, 9, 142  
 Java Man, 219  
 Jaxartes, 152, 159, 161  
 Jayaswal, K.P., 165  
 Jaricho, 13, 113  
 Jesusalem, 166  
 Jhangar, 102, 104  
 Jhelum, 147, 179  
 Jhukar, Jhukar Culture, 58, 71, 94, 95, 96, 97,  
     98, 99, 100, 101, 102, 104, people, 97, 100, pot, 95  
 Jordon, 13  
 Jorwe Culture, 71, 87, 104  
 Joshi, J.P., 42

Jotiya, 178  
 Judaea, 160, 167, 174, 185  
 Junagadh, 153-154, 200  
 Junapani, 114  
 Jungaria, 144

## K

Kabul, 38, 155, 158, 169, 179, 202, 203  
 Kafiristan, 152, 157  
 Kaikeyi, 147  
 Kailash Mt., 144  
 Kakhan, 145  
 Kāla Karma Suttanta, 203  
 Kalat, 16, 31, 32, 156  
 Kālavela, 178  
 Kalgan, 212  
 Kalibangan, 26, 27, 37, 42, 47, 49, 53, 57, 59, 61, 92  
 Kalinga, 209  
 Kallatae, 179  
 Kalyani, 175  
 Kāmboja, 120, 139, 147, 150, 151, 152, 153, 155, 160  
 Kanchipuram, 216  
 Kandhara, 39, 155, 156, 202, 213  
 Kang-Kiu, 156  
 Kanheri, 193  
 Kañkas, 150, 156  
 Kapi, 166  
 Kapisa, 168  
 Kara Bura, 10  
 Karachi, 109  
 Karadagh, 56  
 Karki river, 154  
 Karle, 193  
 Karnikāras, 156  
 Karpas, 167  
 Karpion, 180  
 Karppu, 180  
 Karpura, 180  
 Karuppa, 180  
 Kashgar, 152, 157, 159, 212  
 Kashmir Valley, 72, 213, 214, 220, 221  
 Kaspapyrus, 169, 179  
 Kassite, 64, 117  
 Katelai, 222  
 Kauravas, 92  
 Kausāmbī, 91, 192, 193, 199

Kautilya, 218  
 Kaveri, 78, 88  
 Kāvya, 147  
 Kayani, 147  
 Kayatha, 71, 72  
 Kāyavya, 151, 160  
 Kechibeg, 80  
 Kej Valley, 158  
 Kekaya, 147  
 Kenyapithecus, 219  
 Kerala, 113  
 Kesarapalli, 88  
 Ketumālā, 164  
 Khafajah, 34, 54, 55  
 Khan, F.A., 17, 20, 26  
 Khapuz Tepe, 68  
 Kharoshthī, 170, 171, 199, 200, 211, 213  
 Khāsi, 73-74  
 Khatri, A.P., 7  
 Khawak Bora Pass, 160  
 Khoresam, 56  
 Khorezm, 210  
 Khotan, 145, 210, 211, 212, 217  
 Khurab cemetery, 34, 42, 97  
 Khuzistan, 33  
 Kibe, M.V., 140, 141  
 Kiching, 75  
 Kile-Ghul Mohammad, 3, 15, 18, 20, 21, 22, 24, 80, 221  
 Kiln, 41, 42  
 Kinnari, 144  
 Kirāta, 139, 147, 150, 153, 155, 155, 156, 159  
 Kish, 31, 34, 42, 44, 45, 46, 51, 54, 57, 58, 59, 63, 66, 131, 172, 222  
 Kitava, 151, 158  
 Kneeling figure, 29  
 Knife, 49, 69, 105  
 leaf shaped knives, 49  
 Knossos, 58, 62, 87  
 Koban Culture, 81, 87  
 Kodaikanal, 110  
 Kodekal, 76  
 Kolwa, 32, 158  
 Konce Darya, 144  
 Koph, 166  
 Kophen, 169  
 Kosarkas, 139, 142  
 Kot Diji, 19, 26, 27, 44, 80

- Kramer, S.N., 67  
 Krauñca, 139, 144  
 Krauñca dvipa, 144, 151, 161  
 Kraunca mt., 144  
 Krishna, 9, 88  
 Krishnaswami, V.D., 10, 13, 78, 106, 108, 111  
 Kshatriya, 183  
 Kṣirodsāgar, 139, 142, 143, 151, 161  
 Ktesias, 170, 180  
 Kuchā, 143, 145  
 Kuchai, 72, 75  
 Kulli, 16, 17, 20, 32, 33, 34, 36  
 Kultepe, 118, 135  
 Kulutas, 158  
 Kulu Valley, 158  
 Kumbhanda, 178  
 Kunjindas, 159  
 Kunoor Valley, 75  
 Kurkutie Sini, 75  
 Kurus, 120, 147  
 Kurukshetra, 81  
 Kuśadvipa, 146  
 Kush, 128  
 Kushāṇas, 109  
 Kustana, 211, 212  
 Kuveni, 176
- L**
- Lagash, 34, 51, 66, 70  
 Lahar, 22, 24  
 Lakhiyopir, 91  
 Lal. B.B., 26, 81, 91, 92, 93, 94, 102, 139, 148, 149, 224  
 Lal Qila, 81, 82  
 Lamberg-Karlovsky, C.C., 20, 34, 35, 38, 40  
 Lamp, 85  
 Langhanaj, 12  
 Lañkā, 139, 140, 141, 148, 174  
 Laos, 74  
 Lapis-lazuli, 27, 40, 48, 56, 66, 78  
 Lapithos, 113  
 Las Bela, 29, 32, 38  
 Lassen, 152  
 Laufer, B., 215  
 Lauhityas, 154  
 Lauriyanandangarh, 196  
 Law, B.C., 146, 147  
 Lead, 51, 56
- Leaf design, 199  
 Leakey, L.S.B., 219  
 Leeman, W.F., 66  
 Legend, 129, 131, 132, 143, 181, 182, 212, 215, 216  
 Lekhahia, 12  
 Leopard, 89, 201  
 Leshnik, L.S., 109, 111, 114, 223  
 Levalloisean, 6, 10, 220  
 Limestone, 47, 48  
 Lion, 64, 65, 180, 196, 199, 201, 209, 216  
 Lion Capital, 193  
 Lipi, 200  
 Lipikāra, 200  
 Loebanr, 222  
 Logic, 184  
 Lohajañgha, 151, 158  
 Lohas, 150, 152, 153  
 Lohit, 73, 154  
 Lohitśāgar, 139, 146  
 Lohumjo-daro, 58, 94, 99, 101  
 Lojar Valley, 158  
 Loralai, 16, 29, 80  
 Lothal, 37, 38, 39, 40, 41, 42, 46, 47, 49, 50, 51, 52, 55, 57, 59, 61, 62, 66, 92  
 Lotus, 196, 197  
 Lou Lan, 80, 142  
 Lüder, M., 143  
 Lugs, 77  
 Lunate, 12  
 Lurewala, 102
- M**
- Macdonell, A.A., 118  
 Macedonia, 186, 189, 203  
 Macedonian Greeks, 217  
 satrap, 179  
 Macehead, 75, 83, 135  
 Mackay, E.J., 18, 42, 45, 51, 58, 59, 94, 95, 101  
 Madhyāntikā, 213  
 Madhyadeśa, 140  
 Madhya Pradesh, 141  
 Madras, 120, 147, 155  
 Madura, 176  
 Maga, 160  
 Magas of Cyrene, 203  
 Magadha, 194

- Magadipe, 210  
 Magdalenian, 11  
 Mahābhārata, 92, 94, 120, 138, 142, 144, 145,  
     149, 151, 152, 154, 156, 157, 158, 159, 160, 161,  
     193, 215  
     Ādiparva, 149, 150  
     Anusāsanaparva, 151, 155  
     Āraṇyakaparva, 149, 150, 155  
     Bhīṣmaparva, 149, 150, 151, 153, 156  
     Digvijayaparva, 150  
     Dronaparva, 151, 153, 155  
     Karṇaparva, 151, 153, 155  
     Sabhāparva, 149, 150, 151, 153, 160  
     Śāntiparva, 149, 150, 151, 153, 155  
     Udyogparva, 151, 155  
     Upāyanaparva, 150, 154, 158  
     Vanaparva, 156  
 Mahābodhiyāma, 207  
 Mahādvīpa, 164  
 Mahājanpad, 223, 224  
 Mahākośala, 141  
 Mahānagar, 208  
 Mahāpali, 210  
 Mahāparinirvāṇa, 176  
 Mahārakhita, 203  
 Mahātīrtha, 176  
 Mahātīssa, 218  
 Mahāvarīma, 175, 177, 203, 207, 210  
 Mahāvarīma Tikā, 207  
 Mahāvihāra, 208, 210  
 Mahāvīra, 223  
 Mahendra, 178, 208, 209  
 Mahisadal, 75  
 Maka, 203  
 Makran, 16, 34, 39, 66, 67, 158, 167, 190  
 Malabar Coast, 110  
 Malaya, 9, 74, 75, 142, 220  
 Malayalam, 180  
 Male head, 46  
 Malik, S. C., 14  
 Mallowan, Max, 99, 101  
 Malwa, Malwa Culture, 71, 83, 87, 88, 104  
 Mānasarovara, 144  
 Manchanda, O., 41  
 Manchhar lake, 94  
 Mandara, 145  
 Mandchas, 139, 140  
 Māndhātā, 153  
                 Manger, 47  
         Maṇi-Kāñcanavarṣa, 145  
         Manoti, 83  
         Manu, 131, 184  
         Marco Polo, 142, 145  
         Marduk, 131, 132  
         Mari, 34, 56  
         Marshall, J., 18, 63, 64, 180  
         Marutah, 125  
         Mashkai, 32  
         Maski, 90  
         Masson, V. M., 24  
         Mātā Prithvi, 123  
         Mathematics, 204  
         Mathura, 151, 153  
         Matrimonial alliance, 202  
         Maurya, Mauryan culture, 2, 5, 157, 186, 187,  
             201, 202, 204, 209, 210  
                 art, 193  
                 column, 196, 197  
                 court, 188  
                 empire, 163, 186, 191, 200, 224  
                 highway 194  
                 palace, 194, 195  
                 period, 170, 178, 187, 188, 193, 201, 207, 209,  
                     210, 211, 214, 216, 217, 218  
                 Polish, 192  
         Max Müller, 118, 136, 184  
         Maya, 183  
         Mayurbhanj, 75  
         McCrindle, J. W., 159  
         Media, 160  
         Median, 120  
         Medical System, 204, 205  
         Medli cott, H.B. 8  
         Mediterranean, 4, 46, 58, 63, 77, 79, 109, 113,  
             114, 126, 135, 169, 224  
         Megalith, Megalithic, 2, 4, 105, 106, 107, 108-109  
             -112-113-115, 223  
         Megasthenes, 145, 186, 187, 188, 193-194 200,  
             202, 204, 205, 217  
         Mehi, 16, 32, 34, 36  
         Meluhha, 41, 66, 67, 70, 222  
         Memphis, 170, 189  
         Mendes, 48  
         Menhir, 111, 112, 113  
         Merodach Baladan, 167  
         Meru, 145, 215

- Mesolithic, 10, 12, 13, 17, 108, 221  
 Mesopotamia, 4, 19, 23, 27, 28, 30, 31, 34, 36, 40, 41, 42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 60, 62, 64, 65, 67, 68, 70, 79, 87, 89, 90, 95, 96, 98, 100, 110, 111, 130, 131, 163, 168, 186, 221, 222 Mesopotamian, 38, 39, 46, 96, 101, 137, 217  
 Mian Ghundai, 21  
 Microlith, 12, 13, 25, 77, 80, 83, 174, 221  
 Middle East, 38, 108, 110, 130  
 Midnapur, 75  
 Mine, mining, 184, 185  
 Minerva, 184  
 Minoan shield, 99  
 Mirashi, V. V., 140  
 Mission, 189, 203, 204, 209, 210  
 Missionaries, 187, 188, 210, 211, 214, 216, 217, 218  
 Mithra, 125  
 Mitra, 118, 125, 136  
 Mittannian, 117, 118, 134, 136  
 Mlechhas, 147  
 Moghul Ghundai, 16, 29  
 Mohapatra, G. C., 80  
 Mohenjodaro, 27, 34, 37, 40, 41, 42, 43, 45, 46, 47, 48, 49, 50, 51, 52, 53, 57, 58, 59, 60, 61, 63, 64, 65, 68, 69, 70, 80, 81, 92, 99, 100, 101  
 Monastery, 178, 207, 210, 214  
 Mongol, 157, 213  
 Mon-Khemer, 73  
 Monolithic columns and pillars, 193, 195  
 Mookerji, R. K., 142  
 Moon, 125, 174  
 Mother, 123, 130  
 Mother-goddess, 24, 35, 45, 62, 63, 66, 77, 78, 222  
 Moti Chandra, 151, 152, 154, 155, 156, 157  
 Mount Vebhār, 198  
 Mousterian, 10, 220  
 Movius, H L. 9, 220  
 Mt. Carmel, 12, 221  
 Muchchatla Cintamani Gavi, 11  
 Mundigak, 16, 18, 19, 20, 21, 24, 26, 27, 36  
 Mughal, M. R., 14, 16, 17, 19, 20, 24, 26, 27, 36, 84, 95  
 Mugheir, 174  
 Mujavanta, 120  
 Muller, 74  
 Mummy, 46, 165  
 Municipal administration, 188, 204  
 Murashu, 173  
 Murty, M.L.K., 11  
 Musyan, 23, 24, 63, 86, 98  
 Myos Hormos, 190  
 Mythology, 103, 132, 133, 204  
     Assyrian, 130  
     Babylonian, 131, 137  
     Sumerian, 131
- N
- Nabonidus, 174  
 Nagas, 175  
 Naga Dvīpa, 175  
 Naga Hill, 74  
 Nagarajarao, M.S., 79  
 Nagarjunkonda, 58  
 Nagda, 83, 85, 86  
 Nairyō-Sangha, 125  
 Naksh-i-Rustam, 169, 198, 199  
 Nakula, 150, 153  
 Nal, 16, 17, 30, 31, 32, 36, 43, 44, 59, 80  
 Namazga, 24, 27, 68  
 Namtar, 132  
 Nana, 126  
 Nanda Dynasty, 186  
 Nan-Shan mt. 157  
 Nanur, 75  
 Narāyanasakhā, 151, 161  
 Narmada, 7, 9, 71, 83, 140, 148  
 Nāsatyas, 118, 127  
 Nasik, 88, 90  
 Nature worship, 124  
 Navdatoli, 83, 84, 85, 86, 87, 222  
 Navjote, 128  
 Neanderthal, 10  
 Nearchos, 168, 171, 204  
 Nebuchadnezzar, 172, 174  
 Necklace, 59  
 Necropolis, 110  
 Needles, 76, 79  
 Neolithic, 4, 13, 15, 17, 19, 25, 71-72, 73, 74, 75, 76, 78, 79, 80, 110, 134, 135, 214, 221, 222  
 Nepal, 154  
 Nevasa, 88, 89, 90, 222  
 Niganṭhas, 178, 207  
 Nilakanta Sastri, K. N., 141

- Pericles, 180  
 Periano-Ghundai, 16, 26  
 Persepolis, 44, 169, 194 195, 198  
 Persepoltan Capital, 198  
 Persia, 31, 42, 56, 109, 155, 168, 169, 170, 183, 195, 201, 224  
 Persian, 5, 31, 32, 55, 67, 120, 121, 136, 160, 169, 170, 171, 195, 196, 197, 200, 201, 202, 214, 217, 224  
     army, 170  
     conquest, 172  
     empire, 172, 188  
     governor, 174  
 Persian Gulf, 4, 39, 47, 51, 52, 56, 65, 110, 111, 167, 172, 173  
 Persian invader, 223  
     invasion, 225  
     knowledge, 121  
 Persian Makran, 22, 33, 36  
 Persian pillar, 196  
     science, 168  
     world, 200  
 Perumbair, 106  
 Peshawar, 206  
 Phallic worship, 177  
 Pharaoh Rameses III, 165  
 Philadelphus, 188-189  
 Phillipine, 108  
 Philosophy, 182, 183, 185, 202, 204  
     Greek philosopher, 184  
 Phoenicia, Phoenician, 63, 133, 172  
     alphabet, 168  
     carpenter, 167  
 Physician, 204  
 Planet, 174  
 Plant, 87, 96, 103, 155, 205  
 Plaque, 65  
 Plato, 183, 184  
 Pleistocene, 6, 8, 10, 11, 12  
     Early, 7, 219  
     Lower, 219  
     Middle, 219  
 Pliny, 168, 188, 205  
 Plough-share, 114  
 Pick, 76, 77, 79  
 Pig, 126  
 Piggott, S. 8, 17, 18, 20, 22, 35, 36, 49, 95, 101, 199  
 Piklihal, 78, 88, 89  
 Pillar, 194, 199  
 Pin, 100, 101, 135  
     copper pin, 83, 100  
     hair pin, 61, 69  
 Pipal leaf, 25, 27, 114  
 Pippali, 180  
 Pit-dwelling, dweller, 79, 214  
 Pitrin, 127  
 Point, 10, 11, 12, 15, 19  
 Polish, 195  
 Polity, 186  
 Polybus, 203  
 Portrait Art, 198  
 Portugal, 108  
 Porus, 179, 181  
 Pottery, 1, 118, 133  
     Harappan pottery, 41, 43, 89, 96  
     Wheel-made pottery, 25, 26, 41  
 Pottery motifs :  
     ball and stem motif, 96  
     bucranian motif, 99  
     chequer board, 30  
     chevron motif, 23, 96, 100  
     coil pattern, 101  
     crescent shaped motif, 98  
     cross-hatched band, 98  
     cup mark, 114  
     diagonal stepped motif, 22  
     eight (8) motif, 99  
     file design, 44  
     fish-scale, 43  
     geometric tree, 44  
     geometrical design, 86, 98  
     hide motif, 99  
     intersecting circle, 44  
     kidney-shaped motif, 43  
     loop pattern, 97  
     loop with suspended line, 30  
     maltese cross, 98  
     mat pattern, 44  
     opposed tringle, 23  
     raised loop motif, 43  
     red band, 95  
     step motif, 30  
     sun and comb motif, 43

- tree of life, 90
- trefoil pattern, 44, 64
- Pottery Types :
  - beakers, 22, 24, 41, 45
  - globular beaker, 30, 33
  - bowls, 28, 30, 41, 45, 68, 77, 82, 84, 85, 92, 95, 98, 104, 105, 222
  - bowl-on-stand, 110
  - channel-spouted bowl, 83, 84, 110, 222
  - footed bowl, 41
  - globular bowl, 22
  - hallow-stemmed bowl, 82
  - pedestalled bowl, 84
  - shallow bowl, 24
  - three-legged bowl, 89
- Cup, 20, 33, 34, 35, 84, 100
  - champagne cups, 84, 87
  - feeding cup, 41, 44
  - pedestalled cup, 104
- Dish, 43, 45, 82, 89, 92, 96, 105
  - dish-on-stand, 33, 41, 68, 98, 103
  - dish with looped feet, 88
  - offering dish, 45
- Flask, 33
- Food stand, 22, 96, 100
- Goblet, 41, 84
  - stemmed goblet, 23
- Jar, 26, 33, 41, 48, 89, 99, 135
  - globular, 85
  - perforated, 68
  - spouted, 104
  - storage, 99
- Pan, 41, 105
  - frying pan, 69
- Pot, 78, 85, 89, 104, 105, 222
  - globular, 89
  - multiple, 78
  - spouted, 78, 224
  - strap handled, 104
  - tea pot, 85
  - tulip shaped, 105
- Vase, 33, 54, 68
  - bottle shaped, 33
  - cylindrical, 54, 68
- Vessel, 26, 33, 41, 45, 79, 85, 88, 100, 105
  - carinated, 77
  - channel spouted, 88
  - footed, 100
- globular, 26, 79
- knobbed, 41
- kūjā shaped, 85
- legged urn, 110
- legged vessel, 105
- perforated, 33, 41, 45
- spouted, 100
- Ware
  - Amri Ware, 32
  - Aryan Ware, 135
  - Black-and-Red Ware, 105
  - Black Burnished Ware, 134
  - Black-on-Red Ware, 41, 88, 89
  - Buff Ware, 17, 24, 36, 42
  - Burnished Grey Ware, 17, 72, 77, 78, 79, 88, 134, 221
  - Cappadocian Ware, 134
  - Cretan Ware, 98
  - Grey Ware, 42, 94, 134, 222
  - Habur Ware, 134
  - Incise Grey Ware, 34
  - Jorwe Ware, 89
  - Kechi Beg Ware, 20
  - Khirbet Kerak Ware, 134
  - Kulli Ware, 35
  - Malwa Ware, 85
  - Northern Black Polished Ware, 91
  - Ochre Coloured Pottery, 71, 81, 82, 91, 104, 149, 224
  - Painted Grey Ware, 71, 91, 92, 93, 94, 104, 149, 223
  - Quetta Ware, 21, 22, 24
  - Red Ware, 17, 36, 222
  - Reserved slip Ware, 42, 43
  - Samarra Ware, 86
  - Scarlet Ware, 33, 35
  - Sepia Ware, 82
  - Potwar region, 7
  - Pounder, 75, 76
  - Prabhas Culture, 73
  - Pragjyotisa, 156
  - Prakash, 85, 88
  - Prakrit, 206, 208
  - Prayer, 128
  - Pre-Dynastic Egypt, 32
  - Pre-Harappan Culture, etc., 3, 14, 31, 59, 221
  - Pre-Mauryan, 165, 192, 193, 197, 206, 215

Pre-Sargonid, 53

Priest, 64, 204

Privy, 40

Procession, 209

Proto-Australoid, 77

Protohistoric Period, 210

Proxenoi, 204

Pseudo Aristotlian, 190

Ptolemy, 142, 158

Ptolemaic Egypt, 190

Ptolemy II Philadelphus, 203

Ptolemy II Philopater, 189

Pubba Videh, 164

Pulinda, 147, 151

Punic Africa, 63

Punt, 165

Purānas, 144, 146, 164

Purulia, 75

Pushkalāvati, 179

## Q

Qala-i-Sardargarh, 22

Qatar, 114

Quartzite, 9

Quasi-Persepolitan Capital, 197

Quern, 74, 83

Quetta, 16, 17, 21, 23, 24, 25, 28

Quetta Miri, 21

Quetta Pishin, 16

## R

Rājas, 183

Rājagrīha, 192, 198

Rājapura, 152

Rājāsūya, 150, 151, 157, 159, 160

Rākshas, Rāksasdvipa, 140, 141, 146, 175

Ram, 61

Rāma, 48, 140, 141, 148, 149, 174-175

Ramapithecus, 219

Ramapurva Bull Capital, 192

Ramaṭha, 150, 155

Rāmāyana, 138-143, 145, 147-149, 159, 161, 164, 174-175, 193

Kışkindhākāṇḍa, 139, 141, 144, 148

Ramchandran, K.S., 114

Rameshwaram, 141

Ramesses II, 47

Rana Ghundai, 16, 18, 26, 28, 29, 36, 86

Rangamancha, 206

Rangpur, 37

Rao,S.R., 42, 46, 50, 55, 66, 76, 92

Rapson, E.J., 160, 171

Ras-al-Qula, 52

Ras Result, 112

Ratha, 123

Rathatheri, 102

Rāvaṇa, 139, 140, 148, 174

Ravi basin, 35

Rawlinson, H.G, 2, 174, 189, 201

Ray, N.R, 191, 193, 196

Reaper, 80

Rectangle, 12

Redesiya, 189

Red Sea, 56, 146, 148, 166, 189

Relic Worship, 174

Renigunta, 11

Republic, 183

Rhinoceros, 53

Rhomb, 97

Rhys David, T.W., 152

Rice, 92, 167, 180

Richerd Barnett, 90

Rigveda, 94, 117, 118, 119, 120, 122, 123, 124, 125, 126, 127, 128, 129, 131, 132, 133

Rigvedic, 92, 133, 163

Ring, 105

Ring kernoi, 45

Ring stone, 75, 79

Rivett Carnac, 114

Rizvi Karuna, 22

Rock-cut cave, 113, 192, 198

Rock-cut grave, 110

Rock-cut tomb, 198

Rock-edict, 189, 199, 203, 205, 208

Rod, 90

Roma, 151, 157

Roman, 78, 157

coulter, 114

jupiter, 123

Roman World, 114

Romance, 206

Rome, 157, 188

Rope, 197

Ror, 80, 221  
 Rosette, 44, 197  
 Ross, E.J., 18, 28  
 Rostovtzeff, M. 190  
 Rowland, Benjamin, 198  
 Royal Cemetery, (Ur), 57  
     grave (Ur), 61  
     linen, 165  
     procession, 201  
     tomb (Ur), 48  
     tunic, 103  
 Roychaudhary, D., 152, 160  
 R̄shabha Parvata, 139, 142  
 R̄shikas, 150, 153  
 R̄ta, 122  
 Ruby, 145, 177  
 Rud-i-Biyaban, 25  
 Rudra, 133  
 Rudradāman, 154  
 Rupar, 37, 38, 91  
 Russia, 61, 81

## S

Sadin, 166  
 Sagar, 141  
 Sagdid, 128  
 Sahadeva, 150, 153  
 Sahara, 108  
 Saidu Sharif, 222  
 Šailoda, 139, 144, 145, 151, 159  
 Saipai, 81, 82, 104, 224  
 Šaivas, 177  
 Šakas, 109, 139, 147, 150, 151, 154, 155, 156,  
     161  
 Šakadvipa, 151, 160, 161  
 Šakti, 63  
 Šāla, 141, 140, 148  
 Sali, S.A., 11  
 Salisuka, 203  
 Salmali tree, 146  
 Salya, 160  
 Samaṇas, 178  
 Samarkand, 179  
 Samarra, 23, 30, 43, 97, 98  
 Samudradvīpa, 139, 141, 142  
 Sana, 141  
 Sanchi, 192, 193, 209

Sandalwood, 154, 166, 180, 214  
 Sandstone head, 198  
 Saṅgha, 210  
 Saṅgha Mitra, 209  
 Sangankallu, 76  
 Sanghao Cave, 10, 220  
 Sankalia, H.D., 6, 7, 8 10, 14, 74, 75, 77, 79,  
     81, 82, 83, 84, 103, 104, 138 140, 141, 147, 148,  
     193, 219, 220, 222, 226  
 Saṅkhyā System, 182, 183  
 Sanskrit, 116, 121, 122, 125, 128, 129, 151, 166,  
     167, 180, 184, 206, 212, 216  
 Sapphire, 145, 177  
 Sapta-han, 124  
 Saptaparni, 198  
 Sapta Saindhava, Sapta Sindhu, 117, 121, 136  
 Sarai-khola, 15, 17, 27, 221  
 Sarai Nahar Rai, 12  
 Saraswati river, 94, 126, 135  
 Sarayū river, 148  
 Sarcophagi, 110, 113  
 Sardargarh, 72  
 Sargon, 66  
 Sargonid Period, 42  
 Sarianidi, V.I., 24  
 Sarnath, 196, 198  
 Sarvapitri Amāvasyā, 128  
 Šatabala, 144  
 Šatapath Brāhmaṇa, 120, 131  
 Satin, 166  
 Satluj, 160  
 Satrap, Satrapics, 179, 200, 202  
     Greek, 200  
 Sattva, 183  
 Satvesa, 21  
 Saubhūti, 181  
 Savitar, 184  
 Sayce A.H, 56  
 Schetenkoy, 68, 104  
 Scorpion, 51, 54  
 Scraper, 10, 11, 73, 76, 79, 80  
 Script, 175, 187, 191  
 Scylax, 169, 172, 173, 179, 180  
 Scythian, 109  
 Sea, 1, 38, 66, 111, 119, 121, 140, 142, 146, 163,  
     164, 171, 173, 179, 184, 190, 207, 215, 217, 218,  
     220, 222, 223

- Sea-voyage, 133, 164, 165, 185  
 Seal, 20, 30, 35, 48, 50, 51, 54, 61, 62, 64, 65, 70,  
     95, 100, 101, 221  
         calcite, cylinder, 52  
         circular, 51, 52, 66  
         cretan, 96  
         cubical, 52  
         cylinder, 35, 52, 53, 54, 90  
         gypsum, 135  
     Hittite, 52  
     Indus or Harappan Seal, 51, 60, 62, 66, 99,  
     101  
     Jhukar, 101  
     Kassite, 98  
     lonzenge shaped, 53  
     Persian Gulf, 52, 222  
     pottey, 54  
     round, 51  
         Sargonid, 124  
         stamp, 31, 135  
         steatite, 31, 47, 52  
         stone, 38, 54  
         Sumerian, 53, 90  
     Sealing, 51, 65, 221  
     Second Glacial Period, 219  
     Seleucus, 202, 205  
     Seleucid House, 202, 203  
     Sematic, 53, 130, 131, 137  
     Sennacherib, 167  
     Sepulchral monument, 111  
     Seshadri, 76  
     Sewell, R., 106  
     Shadipur, 221  
     Shaft grave, 113  
     Shahbazgarhi, 200  
     Shahpur, 147  
     Shah Tepe, 27, 57, 58, 77, 78, 82, 84, 93, 102,  
         134, 135  
     Shahi Tump, 33, 224  
     Shahr-i-Sokhta, 19, 24, 25, 36  
     Shalmanesar III, 167  
     Shamash, 64  
     Shang Period, 81  
     Sharma, A.K., 92  
     Sharma, G.R., 11  
     Sharma, T.C., 102  
     Shastri, K.A.N., 74  
     Shawl, 151  
     Sheep, 24, 151, 180  
     Sheikhdom of Abu Dhabi, 33  
     Shell, 27, 31, 47, 56, 66, 77, 102, 190, 221  
         laddle, 51  
         scale, 54  
     Shen Habbin, 166  
     Shighnan, 153  
     Shilka Cave Culture, 80  
     Ship 34, 38, 54, 66, 119, 163, 164, 175  
     Shovel, 76  
     Shub-ad's grave (Ur), 34  
     Siah Damb, 18, 31  
     Sialk, 16, 17, 21, 22, 28, 29, 30, 31, 36, 43, 49,  
         84, 85, 86, 88, 89, 95, 110, 134, 135  
     Siam, 74, 160  
     Siberia, 164  
     Siestan, 15, 16, 22, 23, 24, 25, 28, 29, 33, 34, 36  
         42, 93, 97, 98, 99, 160  
     Silk, 172, 216  
     Silk route, 214, 218  
     Silver, 55, 66, 105, 145, 154, 166, 170, 180, 201  
     Simhala, 151, 160  
     Simhalese Chronicle, 208  
     Simhapura, 175  
     Simhavāhu, 175  
     Siñ, 64  
     Sindon, 166  
     Sindhu, 166, 167  
     Singhal, D.P., 2  
     Sinkiang, 144, 210  
     Sino-Indian, 215-216  
     Sircar, D.C., 146  
     Sirkap, 200  
     Sirwan, 142  
     Sister, 123  
     Sita, 139, 140, 142, 148, 151, 161  
     Śiva, 63, 64  
     Śivalinga, 177  
     Sivapithecus, 219  
     Śivikasāla, 177  
     Siwalik Hill, 219  
     Skeletal remains, 135  
     Skiapodes, 180  
     Skin, 151, 180, 214  
     Skull, 135  
     Slate, 53, 73  
     Smith, V.A., 2, 197, 204

- Snake, 31, 53, 54, 62, 205  
 Soan, 7, 11, 219, 220  
 Socretes, 183  
 Soghdiana, 156, 160, 210, 214  
 Solar, 53, 96,  
 Soloman, 166, 174, 182  
 Solutrian, 11  
 Soma, 125, 128  
 Somagiri, 145  
 Somaliland, 108, 146, 165  
 Somali trader, 165  
 Sonpur, 76  
 Sophocles, 180  
 Sophytes, 181, 205  
 Sothisālā, 178  
 Soundara Rajan, K.V., 110, 112  
 South-East Asia, 9, 72, 73, 74, 75, 76, 108, 187  
     214, 220, 221  
 Spain, 108  
 Spate, O.H.K., 39  
 Spear, 86, 171, leaf shaped spearhead, 49  
 Spindle whorls, 51, 69, 82  
 Spirit, 128, 132, 182  
 Spring-board, 109  
 Square-cut bearded head, 65  
 Srāddha ceremony, 128  
 Srāvasti, 91  
 Sramaṇas, 213  
 Sri Laïka, 141, 147, 148, 174-176, 177, 186, 187,  
     207, 208, 209, 210, 218, 224  
 Stag, 70  
 Stage Plays, 206  
 Steatite, 20, 27, 35, 44, 47, 51, 56, 59  
 Stein, A., 14, 20, 22, 32  
 Steppe folk, 103  
 Stone Age, 2, 3, 6, 10, 11, 221  
     Middle Stone Age, 9, 220  
     New Stone Age, 2  
     Old Stone Age, 2, 6, 7, 9 17, 214, 219, 220  
 Stool, 50  
 Stone ball, 61  
 Stone head, 55  
 Stone Vase, Vessel, 34, 221  
 Strabo, 173, 190, 202  
 Straightner, arrow, 76  
 Stringed bow, 171  
 Stupa, 174, 213, 216  
 Subahu, 156, 159  
 Subhāgsena, 203  
 Sudarśana lake, 154  
 Sugrīva, 139, 140, 141, 142, 144, 145, 151  
 Suket, 158  
 Sumatra, 142  
 Sumer Sumerian, 24, 35, 38, 40, 41 42, 43, 44,  
     45, 50, 52, 53, 54, 55, 58, 59, 60, 61, 63, 64, 65,  
     66, 67, 90, 96, 101, 126, 130, 198  
 Sumitra, 177  
 Sun, 98, 125, 127, 145, 146, 174  
 Suparshav, 140  
 Suppara, 175  
 Surang, 184  
 Sur Jangal, 16, 24, 26, 28, 29  
 Surkotada, 37, 42, 44, 51, 92  
 Surya, 125  
 Susa, Susian, 16, 22, 23, 24, 25, 27, 28, 30, 33,  
     34, 35, 42, 43, 44, 47, 48, 49, 50, 51, 52, 53, 54,  
     55, 61, 86, 90, 97, 98, 103, 172, 194, 195  
 Sutkagen-dor, 38  
 Sutlej, 102, 147  
 Suvarṇabhūmi, 164, 177  
 Suvarṇadvipa, 139, 141, 142, 154, 164  
 Suvarṇapuṣpa, 143,  
 Suvarṇapuṣpavihāra, 143,  
 Suvarṇarūpyakadvipa, 141  
 Suvissakha, 154  
 Svāstika, 63, 68  
 Svastivāchana, 178  
 Śvetdvipa, 139, 142, 151, 161  
 Śvetaparvat, 139  
 Swan, 208  
 Swat Valley, 71, 87, 93, 94, 104, 134, 157, 222,  
     223  
 Sweden, 108  
 Sword, 81, 135, 165, 170 224  
 Sylvain Levi, 143, 145, 152, 155  
 Syr Darya, 161  
 Syria, 34, 46, 47, 49, 57, 59, 62, 63, 85, 157,  
     189, 203,  
 Syrinx, 185  
 Szechwan, 74

## T

- T. Narsipur, 77, 78  
 Tablet, 118, 172, 173  
 Tabuya, 130, 131  
 Tadzhikistan, 10, 80, 161

- Tadzhik, 152  
 Taimata, 130  
 Tal-i-Bakun, 22, 23, 30, 36, 90  
 Tal-i-iblis, 22  
 Tamarind, 165  
 Tambouvrine, 60'  
 Tambukolapattan, 210  
 Tamil, 180  
 Tampanian, 9  
 Tamralipti, 207, 209  
 Tamraparni, Tambapanni, 175, 176, 177  
 Ta-yue-chi, 153  
 Taṅgaṇa, 151, 159  
 Tanzania, 219  
 Täpti, 88  
 Tarānāth, 203  
 Tarimbasin, 210  
 Tarn, W.W., 3  
 Tashik-Tash, 10  
 Taxila, 109, 170, 171 190, 199  
 Teak, 56  
 Tehran, 84, 86  
 Tekkalkota, 77, 82, 88,  
 Tel Hassuna, 28  
 Tell Agrab, 35  
 Tell Ajjul, 113  
 Tell Asmar, 40, 41, 42, 44, 50, 51, 53, 57, 58, 66,  
 70, 124, 222  
 Tell Brak, 53, 57  
 Tell-el-Amarna, 61, 118  
 Tell Fara, 113  
 Tell Halaf, 30, 43, 44, 86, 96, 97, 98, 99, 101  
 102  
 Temple, 24, 47, 62, 90, 143, 174, 191  
 Tepe Ali Abad, 96  
 Tepe Gawra, 25, 27, 36, 43, 45, 78, 97  
 Tepe Giyan, 84, 89, 96, 103, 134  
 Tepe Hissar, 82, 100, 103, 134, 135  
 Tepe Mousian, 42  
 Tepe Sialk, 96, 100, 114  
 Tepe Yahya, 19-20, 27, 34, 36, 45, 222  
 Terdal, 77  
 Teri site, 174  
 Thales, 182  
 Thapar, B.K., 104  
 Thapar, R., 67, 102, 136, 223  
 Theatre, 206  
 Theriomorphic, 89  
 Thomas, P., 203  
 Throne, 199  
 Thuparam dagba, 209  
 Tiamat dragon, 132  
 Tibet, Tibetan, 56, 73, 147, 221, 212,  
 Annals, 214  
 Tibeto-Burman, 154  
 Tien-shan, Mt., 144  
 Tiger, 64, 65, 70, 85, 89, 170, 205  
 Tiglath Pilaser III, 167  
 Tigris, 38, 39, 132  
 Tilak, B.G., 117, 118, 130  
 Timber, 167  
 Tin, 55, 56  
 Tirunelveli, 174  
 Tissa, 208, 209  
 Toijet box, container, 65, 68  
 Tokhara, 156  
 Tool, 1, 49, 72, 73, 76  
 Tosi, M., 20, 67  
 Town-planning, 40, 67, 191, 194, 202, 221  
 Toy cart, 25  
 Transcaspina, 142  
 Transcaucasia, 62  
 Trapeze, 12  
 Tree, 62, 103, tree of life, 103  
 Trichur, 113  
 Tripuri, 83  
 Trita, 129  
 Troy, 57, 82  
 Trunian celt, 224  
 Tugra rishi, 119  
 Tukhāra, 150, 156  
 Tungabhadra, 88  
 Turanian Urvolk, 109  
 Turkestan, 56, 159, 164, 211  
 Turkey, 85, 86, 223  
 Turkmenia, 13, 15, 24, 35, 36, 58, 68, 69, 100,  
 117, 134, 222  
 Turquoise, 56  
 Turtle, 48  
 Tutankhamen, 78  
 Tsani Tsangli, 93  
 Tsar-ma, 214  
 Ts'in Dynasty, 216  
 Uchali, 80

- Ukrainian Steppes, 117  
 Ulchis, 80  
 Ulukas, 158  
 Umm-an-Nar, 33, 67  
 Unicorn, 53, 70  
 Upanayana, 128  
 Upanishada, 119, 182, 184  
     Chāndogya, 182  
 Upastha, 122  
 Upatissagama, 176  
 Uppalavanna, 178  
 Ur, 30, 31, 34, 35, 39, 40, 41, 42, 44, 47, 48,  
     49, 51, 57, 58, 59, 61, 63, 65, 66, 98, 99,  
     130, 131  
     Ur of Chaldees, 56, 174  
 Urbanization, 67  
 Uriup, 76  
 Urmia, 93  
 Urugula, 130, 131  
 Urukshiti, 131  
 Urus, 24, 53  
 Uruvela, 176  
 Uruick, B. J., 183  
 Ushas, 122, 127, 184  
 Us-Hindva, 121, 136  
 U.S.S.R., 15, 68, 80, 134, 161  
 Utnapishtim, 131  
 Ut nur, 77  
 Uttarkuru, 120, 164  
 Uttarmadras, 120  
 Uzbekistan, 10, 15

## V

- Vader, 140  
 Vählika, 151, 159, 160  
 Vairochana, 211, 214  
 Vaiśravaṇa, 212  
 Vaiśyas, 183, 210  
 Vaiyamaka, 151  
 Vajra, 124  
 Valgu, 166  
 Vānaras, 140, 141, 148  
 Varāhmihir, 155  
 Varanasi, 164, 177  
 Varena, 184  
 Varisa, 154  
 Varīṇa, 118, 119, 124, 125, 127, 133, 136, 184,  
 Vaśishṭha, 119

- Vastrapas, 153  
 Vats, M. S., 102, 103  
 Vāyu, 127  
 Veda, 116, 119, 121, 128, 129, 132  
 Vedāntic doctrine, 183  
 Vedic, 2, 5, 38, 77, 102, 103, 182, 223  
 Vedic god, 123, 124, 136, 223  
 Vedisagiri, 208  
 Vemula, 11  
 Vendidad, 121, 128, 136  
 Verethragna, 124  
 Vessagiri, 210  
 Videha, 164  
 Vidyalankar, J., 152, 155, 160  
 Vihāra, 208, 210  
 Vijaya, 175, 176, 177, 178, 212  
 Vijaya Sainbhava, 212, 214  
 Vijitapur, 176  
 Viligi, 130  
 Vinata 142  
 Vindhya, 107, 109, 112, 114, 140  
 Virasena, 203  
 Vivasvata, 129  
 Vivitādhyaksha, 188  
 Volga, 117, 161  
 Vouni, 113  
 Vouru-Kasha, 121  
 Vritra, 124, 132  
 Vritra-han, 124  
 Vulture, 31  
 Vyālas, 199  
 Vyās, 147

## W

- Waddell, L. A., 195, 197, 199  
 Wakhan, 153, 156  
 Walter Ruben, 109  
 Ward, W.H., 47  
 Warka, 40, 44  
 Washing ceremony, 201  
 Waziristan, 16  
 Weapon, 1, 67, 81, 87, 105, 135, 148, 187  
 Weight, 54, 221  
     cubical chert weight, 54  
 Well, 40  
 Western ghat, 113  
 Wheel, 22, 27, 61  
 Wheeler, R. E. M., 4, 30, 39, 40, 45, 53, 91, 92,

102, 109, 112, 114, 189, 198  
William, Jones, 116, 182  
Window, 41, 69, 193  
Wine, 202-203  
Winged lion motif, 198  
Wood, 66, 166, 190, 192, 197  
Wolves, 79  
Wool bearing tree, 168, 180  
Woolley, Leonard, 40, 47, 59, 60, 61, 65  
Wu-Sun tribe, 144

**X**

Xenophon, 168-169  
Xersxes, 169, 179

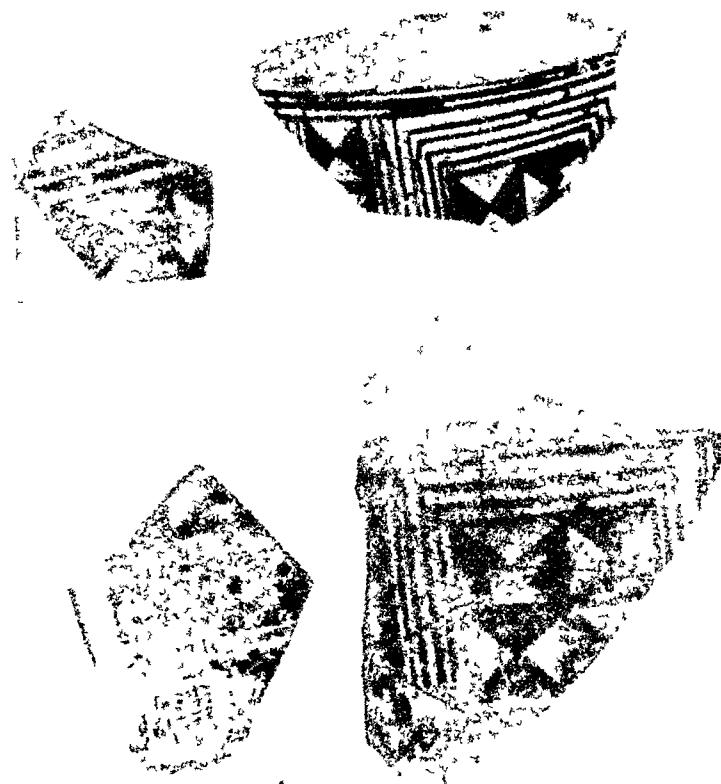
**Y**

Yaghnoblis, 152  
Yakshas, 175, 176, 178  
Yama, 129  
Yangtze Valley, 74  
Yasa, 211, 212  
Yasin, 157  
Yasna, 122  
Yavadvipa 139, 141-142  
Yavanas, 20, 139, 147, 150, 151, 153, 155, 181  
Yavanikā, 206

Yavanapura, 150, 153  
Yavanarāja Tushāspa, 200  
Yemen, 110, 111  
Yerragondapalam, 11  
Yona, 203, 205  
Yotkan, 211  
Yuan Dynasty, 213  
Yudhishtīra, 150, 152, 157  
Yue-Chi, 145 153, 155, 156, 157, 213  
Yunan, 79  
Yunnan, 73, 74  
Yurenas, 184

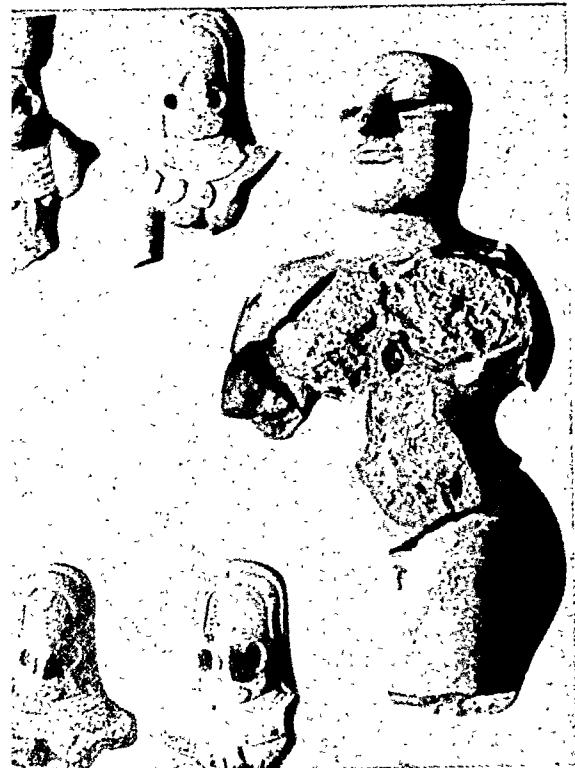
**Z**

Zagros, 64  
Zarafshan, 152  
Zārathuṣṭra, 125, 128, 129  
Zarathustrianism, 124, 126, 128  
Zayak Valley, 96]  
Zend Avesta, 117  
Zenophanes, 182  
Zeriala, 93  
Zeus, 63, 180, 181, 184  
Zhob, Zhob Culture, Zhob Valley, 16, 17, 26,  
    27, 36  
Zorastrian, 160

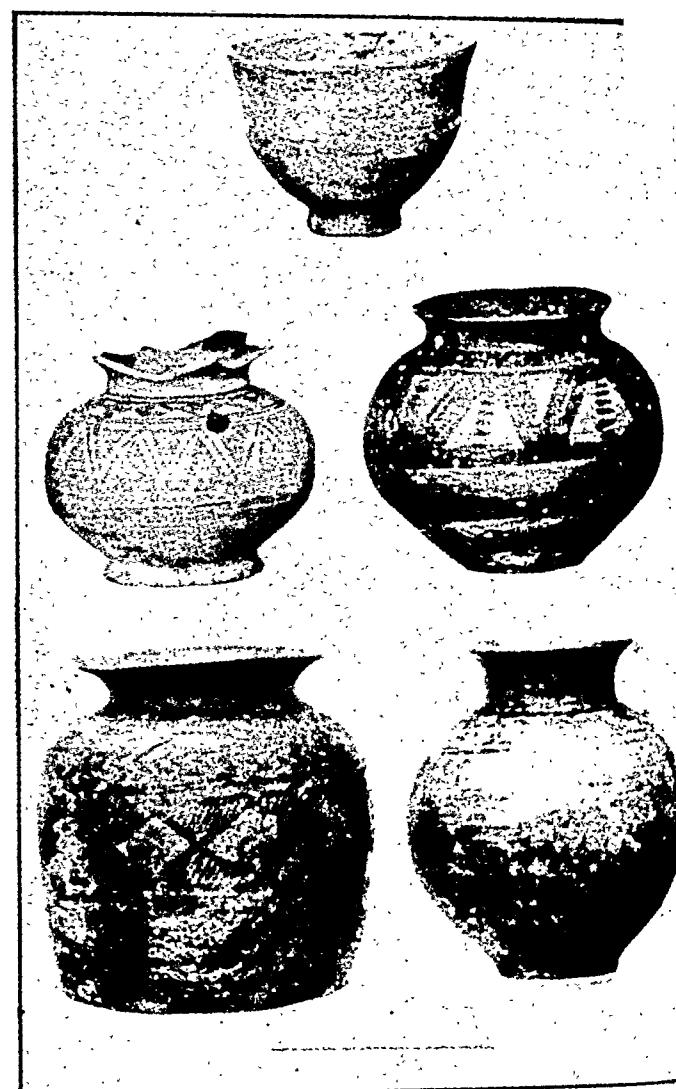
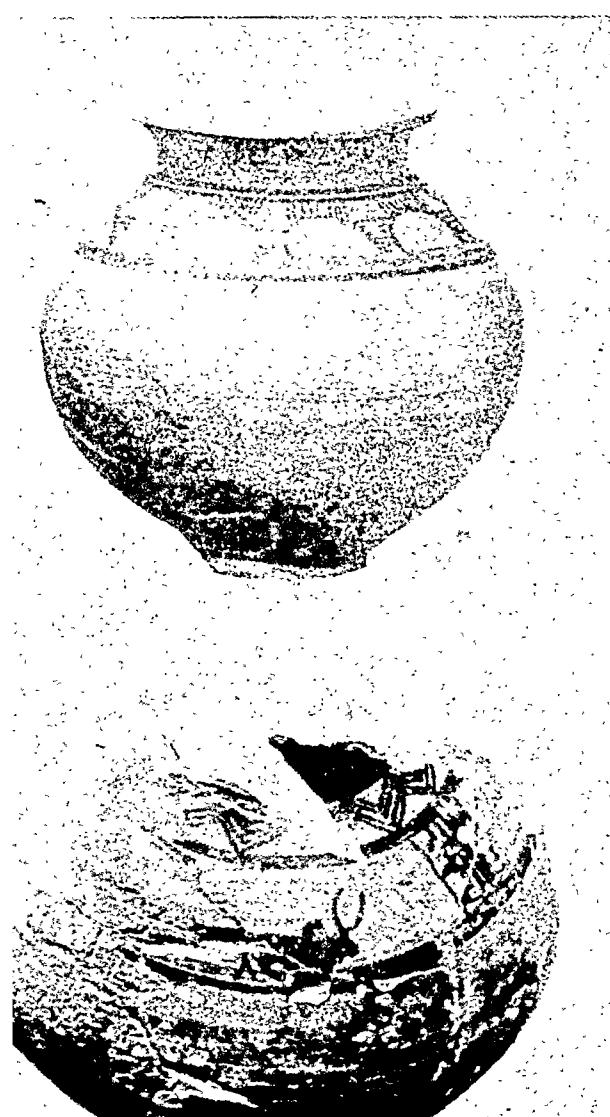


I a : Pottery from Shahar-i-sokhta  
(see p. 24)

I b : Fragments of Steatite Vessels from Tepe Yahya  
(see p. 27)

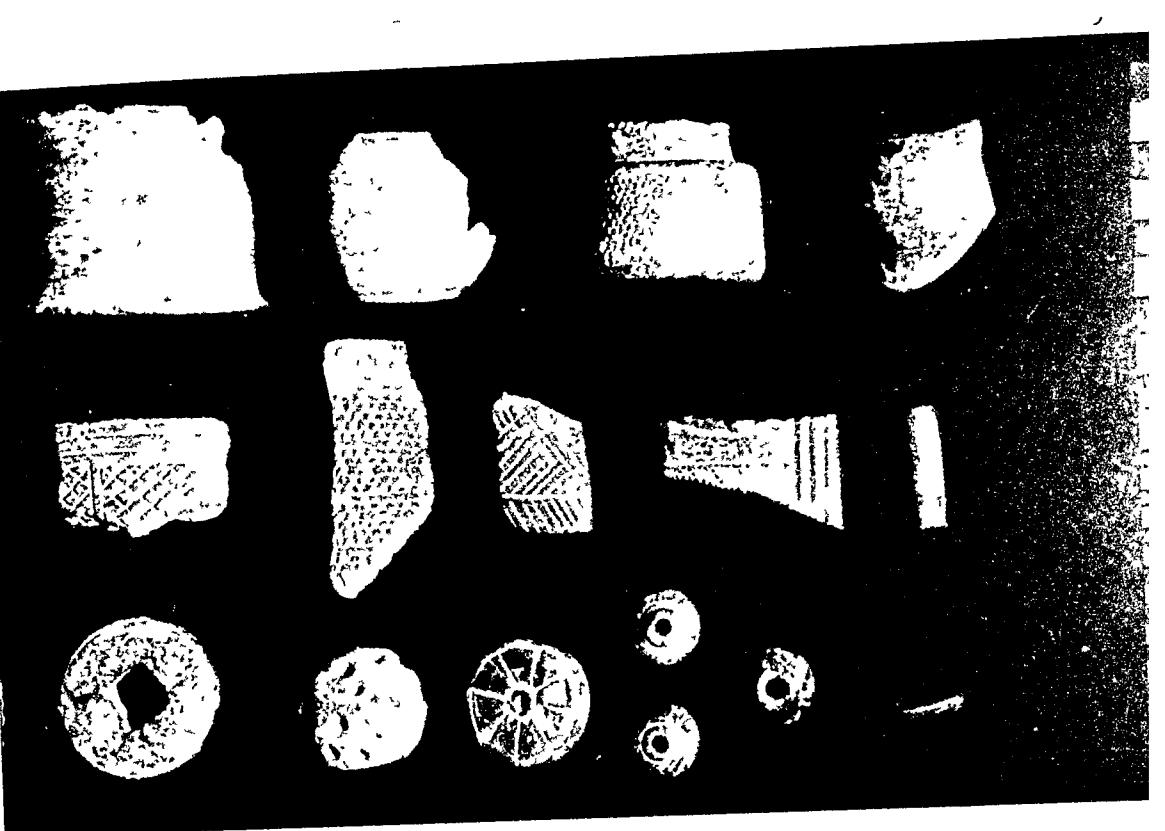


I c : Terracotta Figurines from Zhob Valley sites  
(see p. 29)

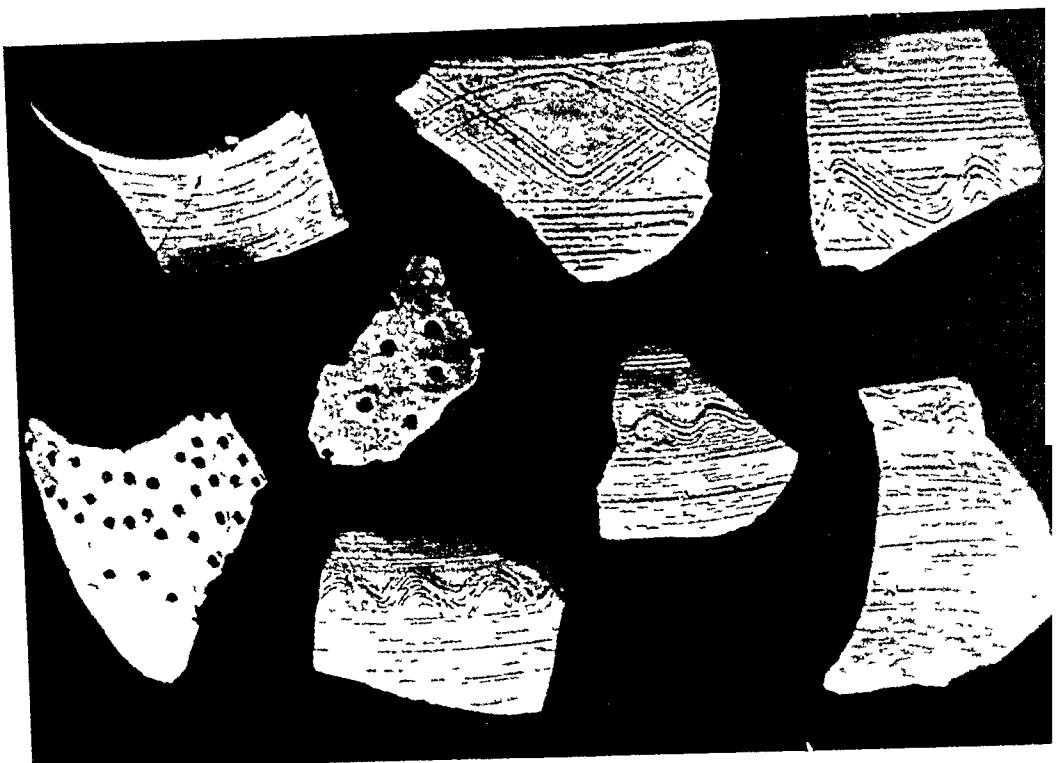


II a : Kulli Type Pottery from Bahrain sites  
(see p. 33)

II b : Kulli Type Pottery from Bahrain sites  
(see p. 33)

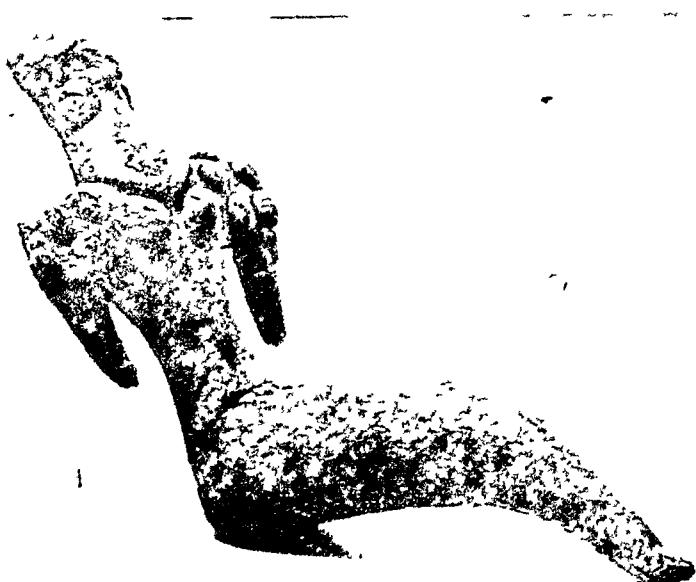


III a : Steatite incised vessels and beads from Tepe Yahya  
(see p. 34)

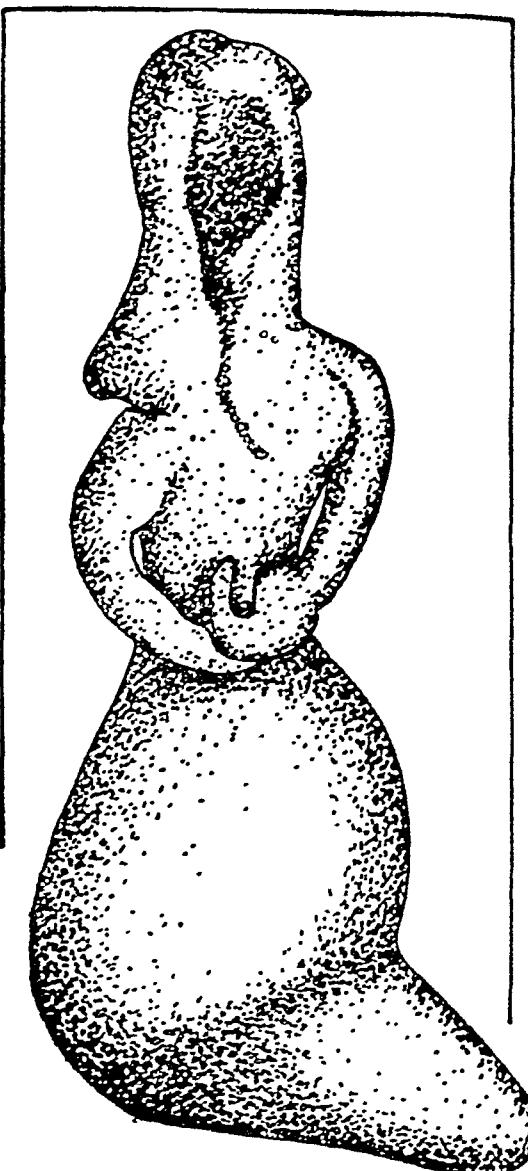


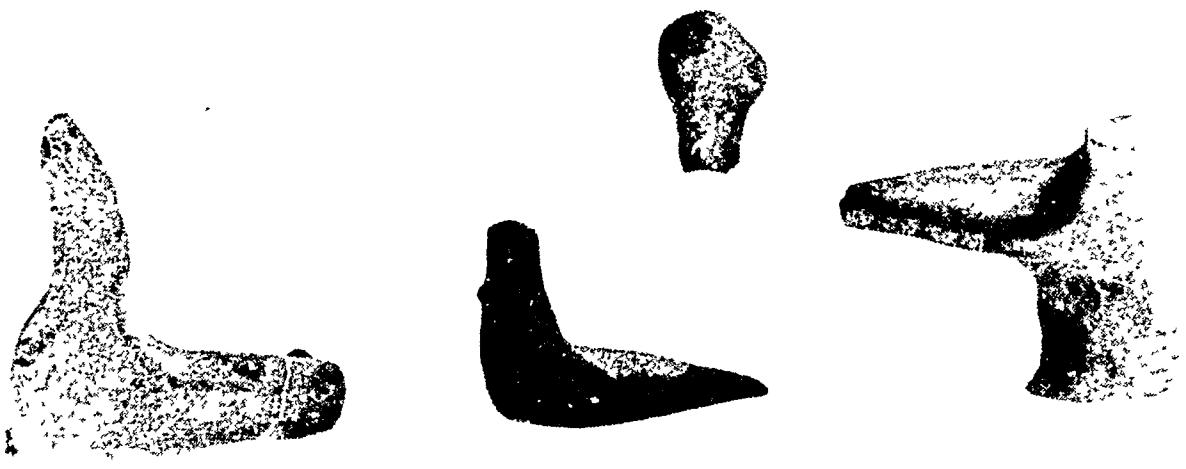
III b : Comb-incised and perforated wares from Tepe Yahya  
(see p. 45)

IV a : Terracotta figurines from Namazga Tepe  
(see p. 35)



IV b : Terracotta figurine from Gumla  
(see p. 35)

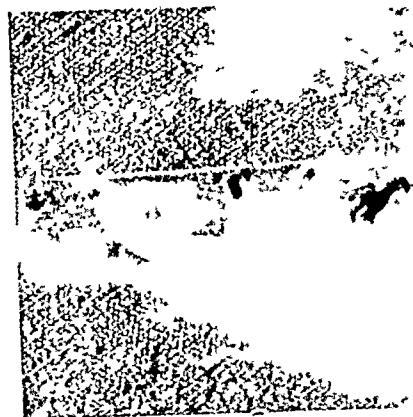




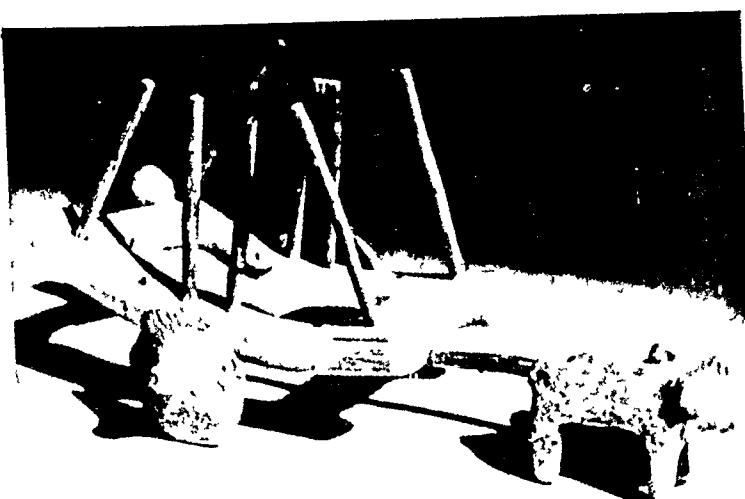
IV c : Terracotta figurines from Jalilpur  
(see p. 35)



V a : Terracotta cart from Mohenjo-daro  
(see p. 38)



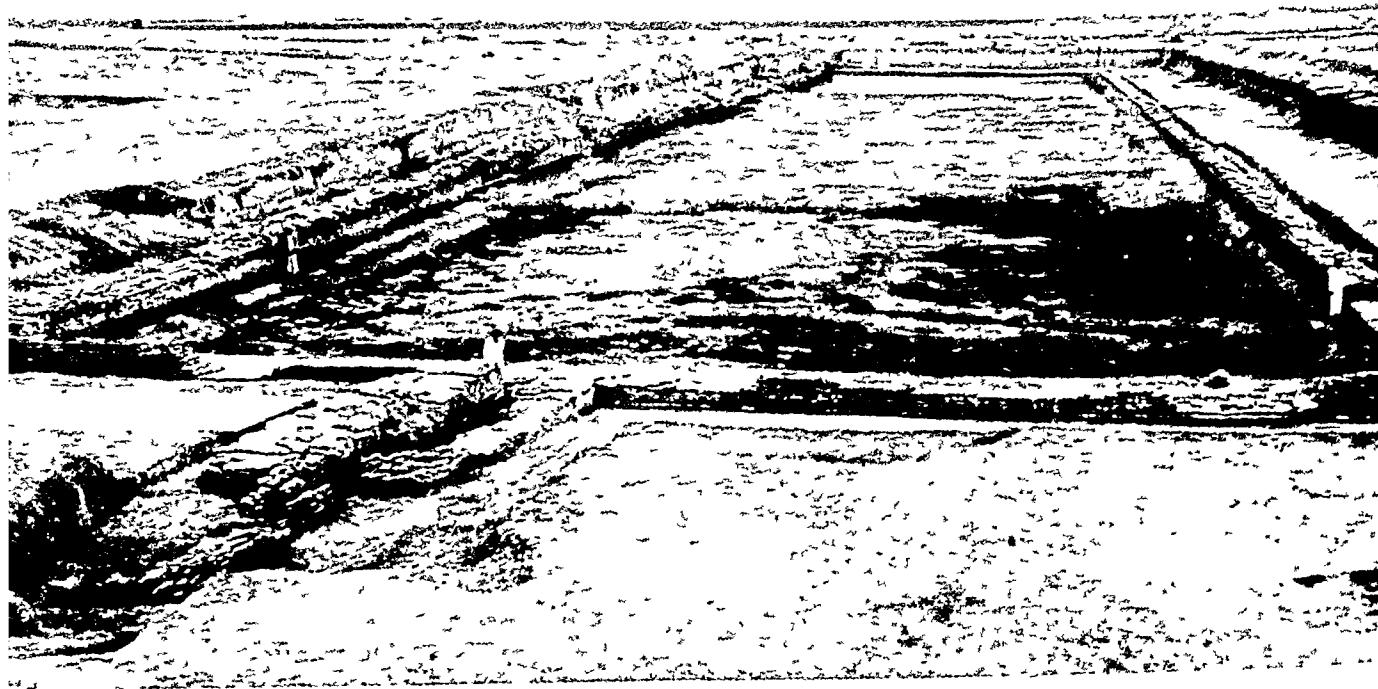
V b : Steatite seal depicting a  
c : Terracotta amulet sho.  
ship (see p. 38)





V d : Terracotta boat from Lothal  
(see p. 38)

VI : Dockyard at Lothal  
(see p. 38)





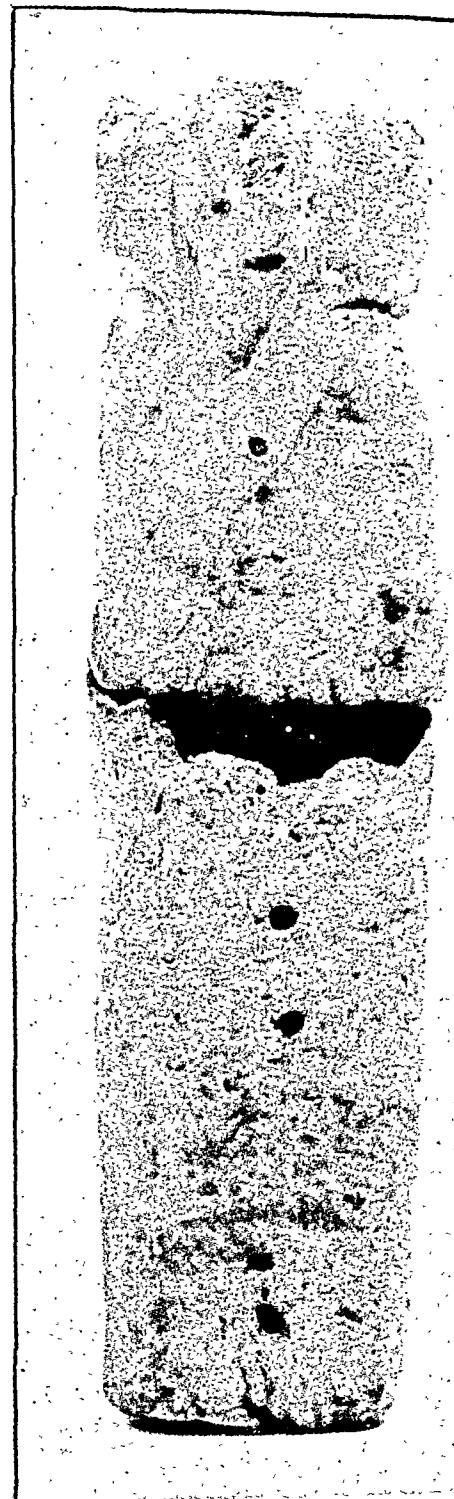
VII a : Jar from Mohenjo-daro showing different designs, including kidney shaped  
(see p. 43-44)



VII b : Mother goddess from Mohenjo-daro  
(see pp. 45, 62)

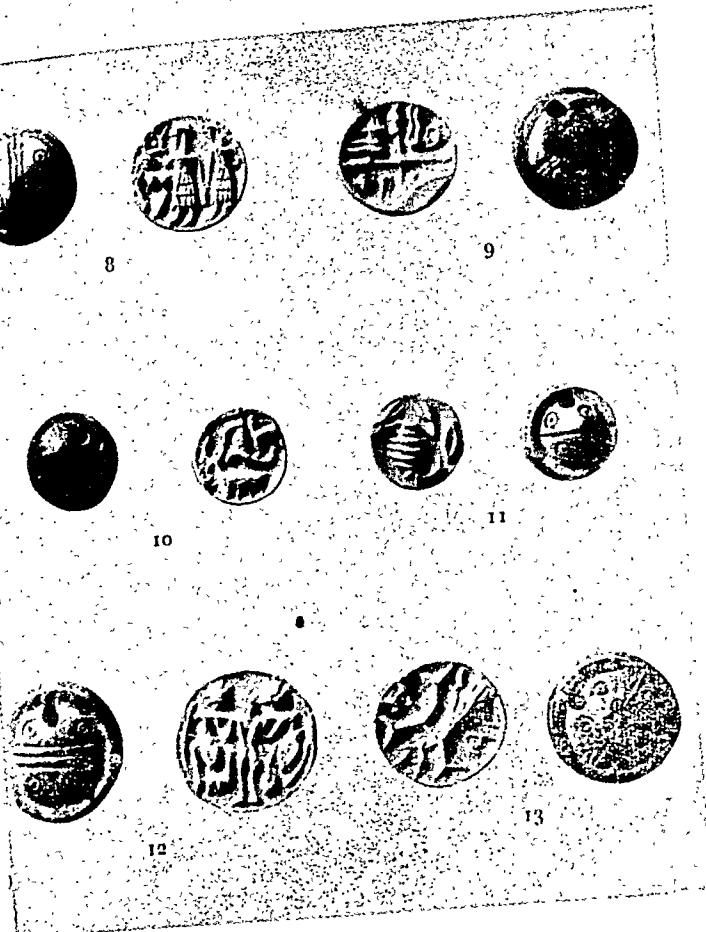


VIII a : Terracotta head  
with square-cut  
beard from  
Lothal  
(see p. 46)



VIII b : Terracotta mummy from  
Lothal (see p. 46)

JX a : Steatite seals from Mesopotamia  
(see p. 51)

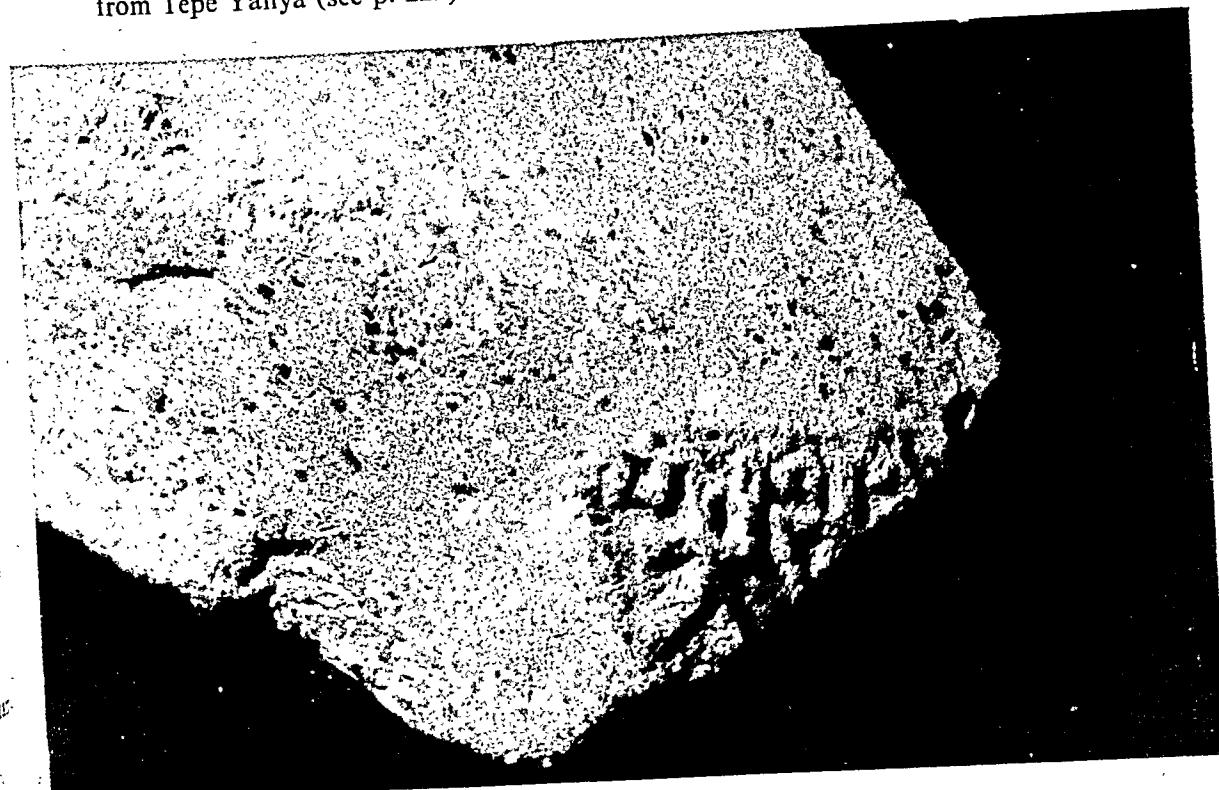


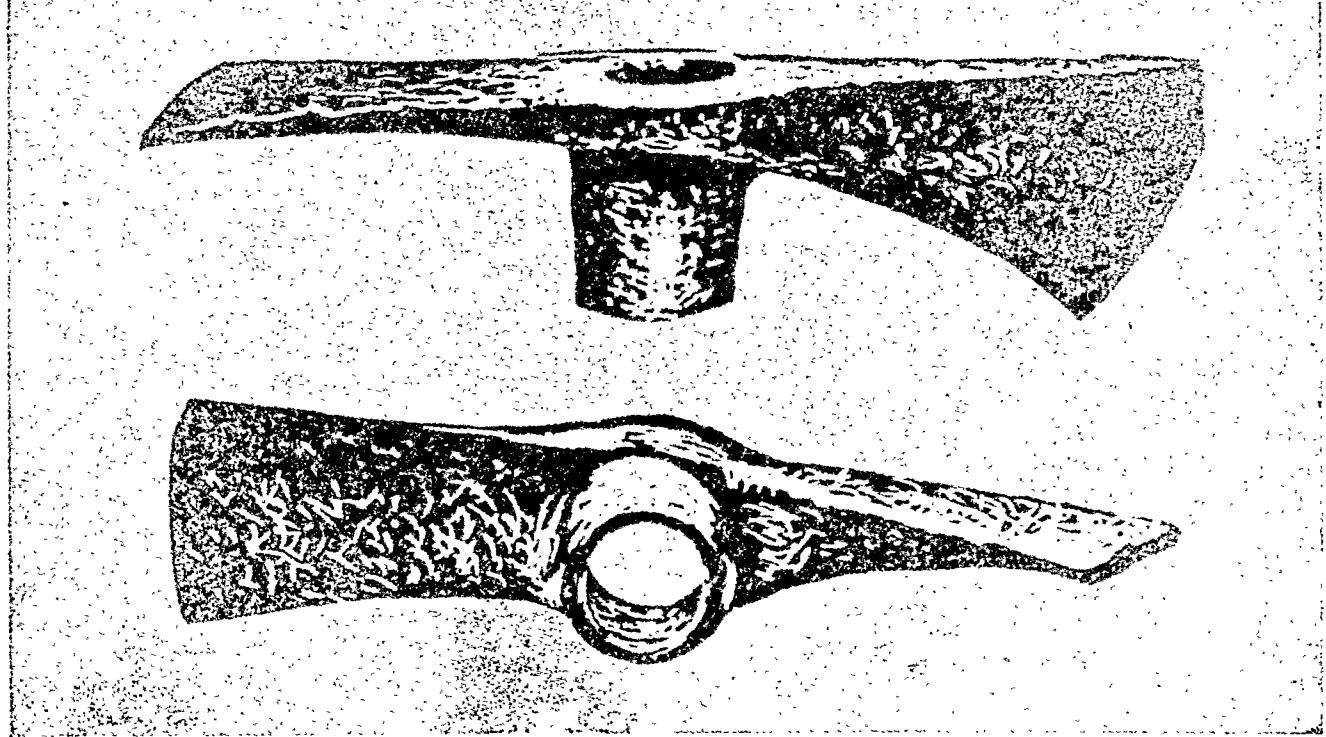
X a : Persian Gulf seal from Lothal  
(see p. 52)



IX b : Steatite seals from Mesopotamia (see p. 51)

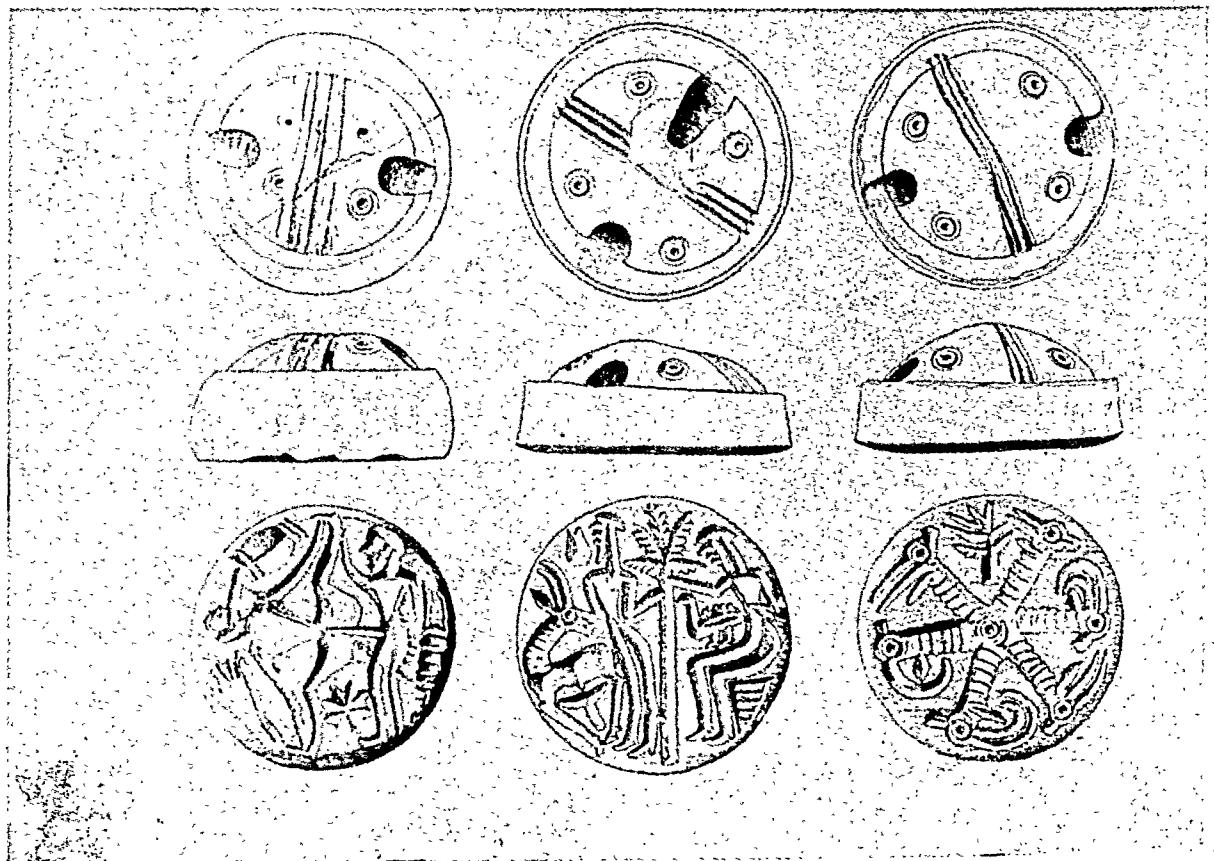
X b : Pot-sherd with impression of a Harappan seal  
from Tepe Yahya (see p. 222)

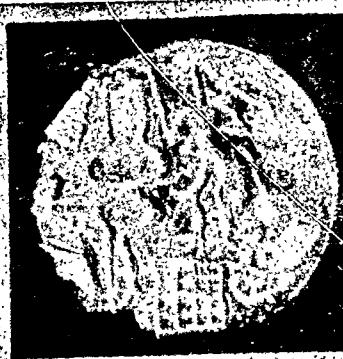




X c : Axe-adze from Mohenjo-daro  
(see p. 49)

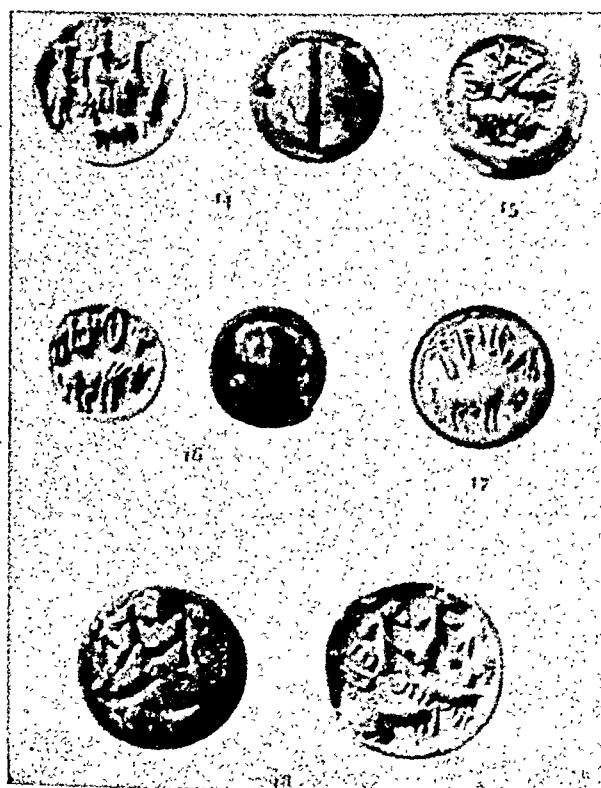
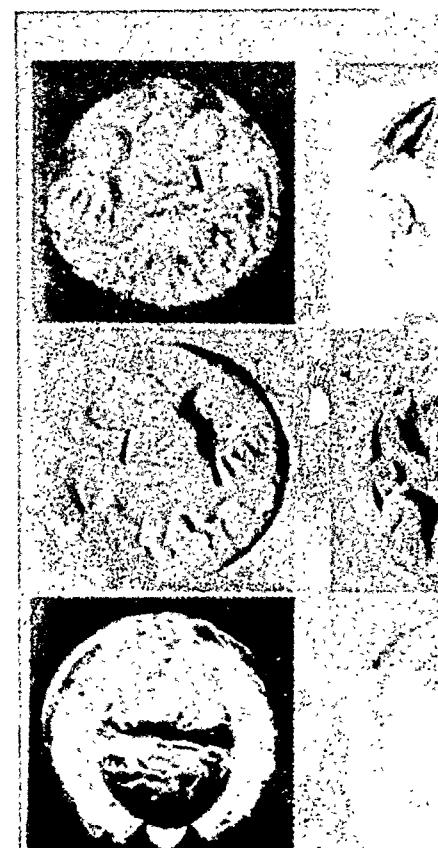
XI a : Seals from Barabar, Persian Gulf  
(see p. 52)





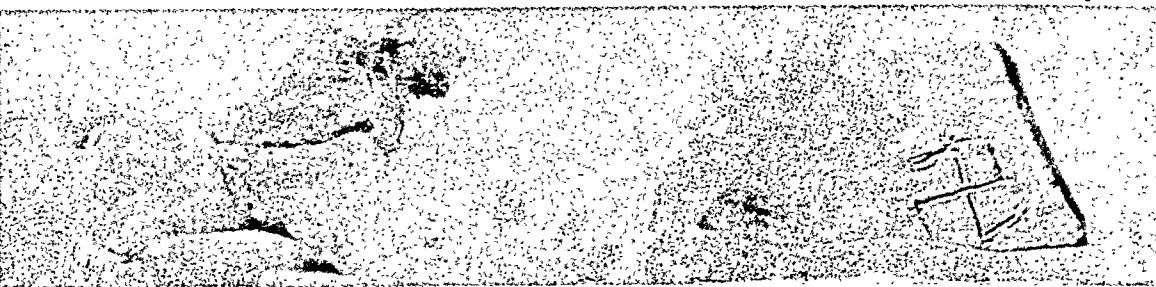
Seal I. (a) Obverse; (b) Reverse (Casts).  
Seal II. (c, d) Obverse and Impression;  
(e) Reverse.  
Seal III. (f, g) Obverse and Impression;  
(h) Reverse.  
Seal IV. (i, k) Obverse and Impression;  
(j) Reverse.

XI b : Seals from Bahrain island  
(see p. 52)



XI c : Seals from Bahrain Islands  
(see p. 52)

XII a : Seals from Mesopotamia  
(see p. 51)



XII b : Bull figurine, and Swastika on a pot-sherd from Altin Depe (see p. 69)



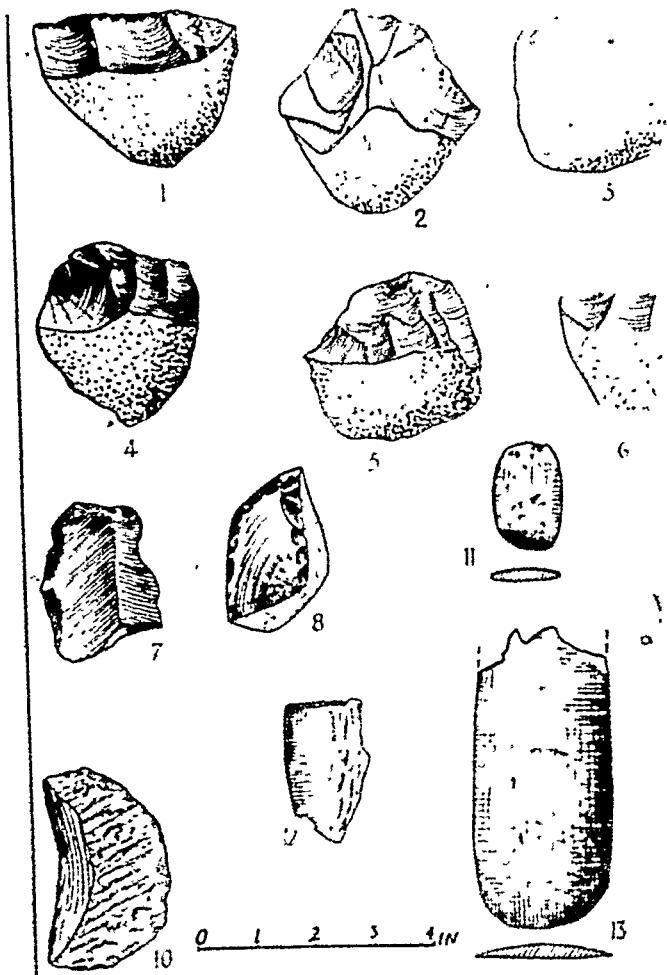
XIII a : Cylindrical seal from Mohenjo-daro  
(see p. 64)

XIII b : Impression of the Gilgamesh Seal from Mesopotamia  
(see p. 64)





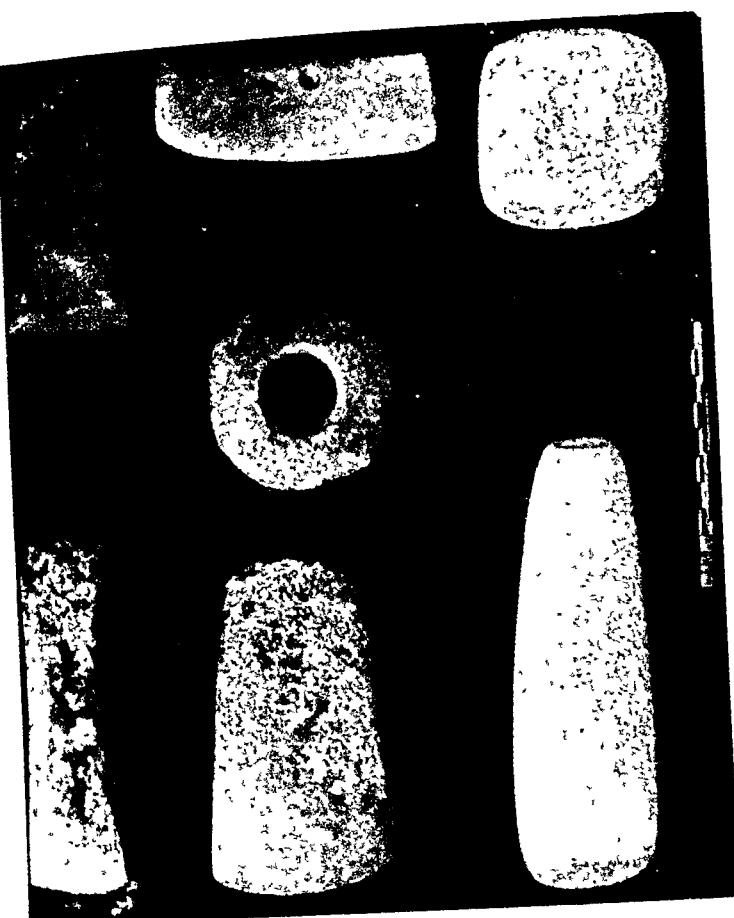
XIV : Cultural equipment of Tell Asmar and  
Harappan sites  
(see p. 70)



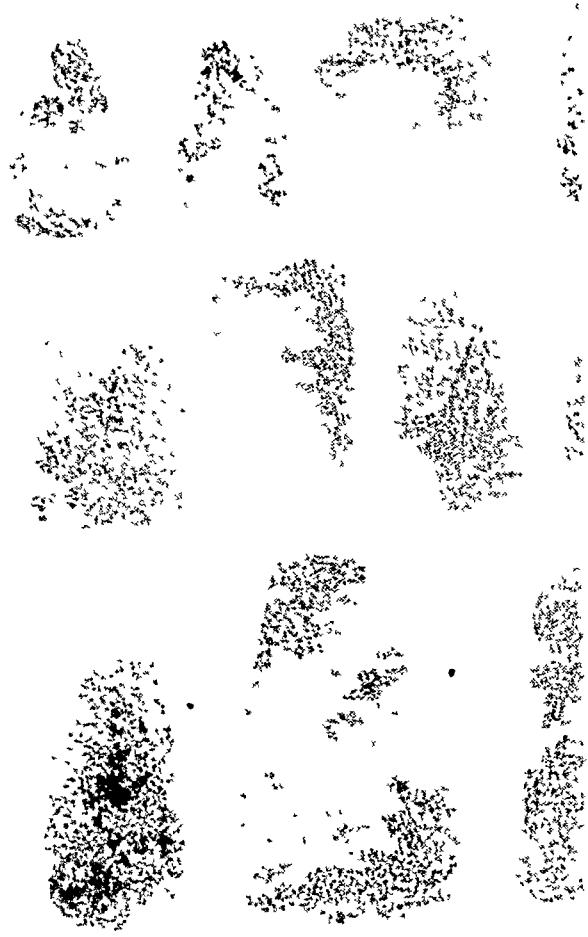
XV a : Neoliths from Soviet Central  
Asian sites  
(see p. 72)



XV b : Neolithic finds from Lou Lan, Chinese Central Asia  
(see p. 72)

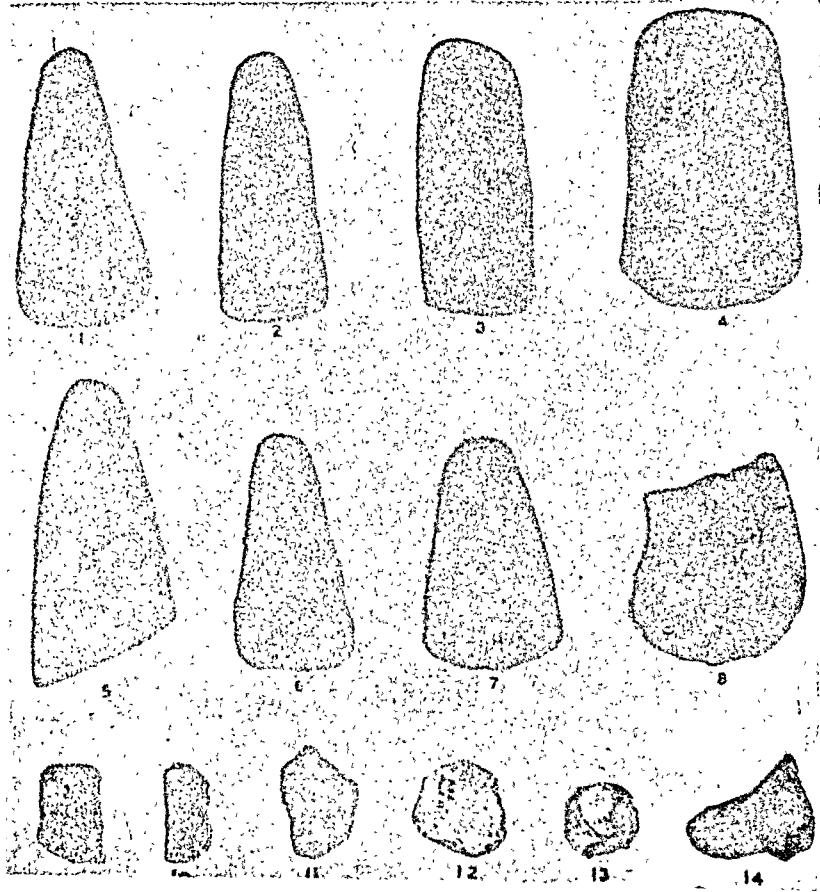


XV c : Neoliths from Burzahom,  
Kashmir Valley  
(see p. 72)



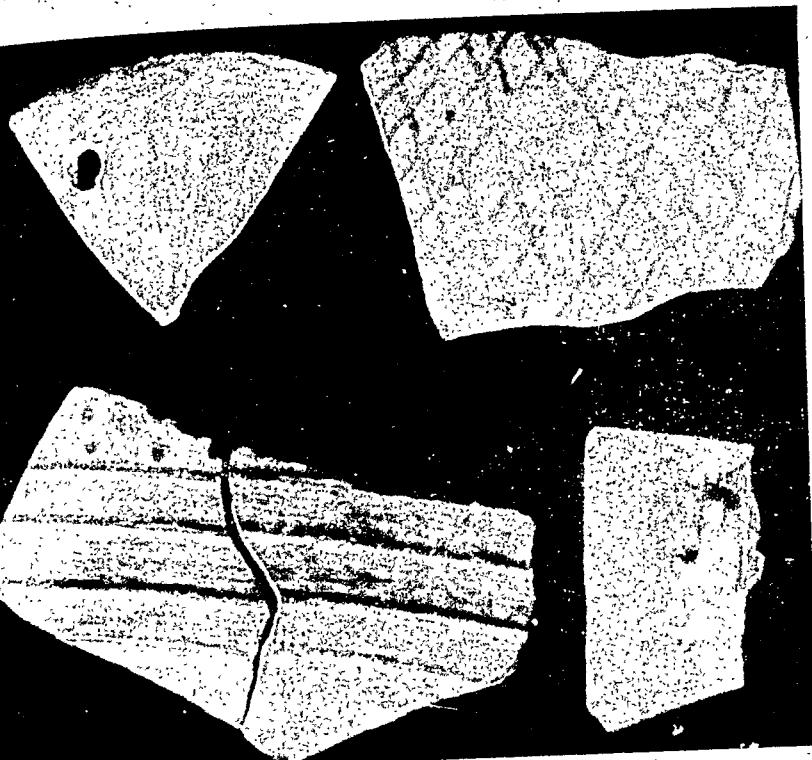
XVI a : Neoliths from Sarai Khola, Panjab  
(see p. 72)

XVI b : Neoliths from Ror,  
Kangara Valley,  
Himachal Pradesh  
(see p. 72)

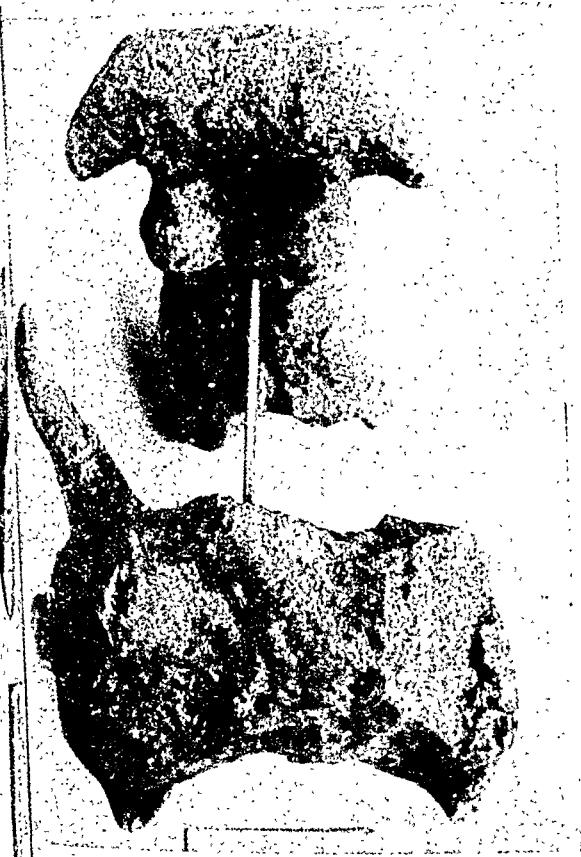


XVII a : Crested Ridge  
Blades from  
Sukkur and  
Rohri, Sind  
(see p. 77)





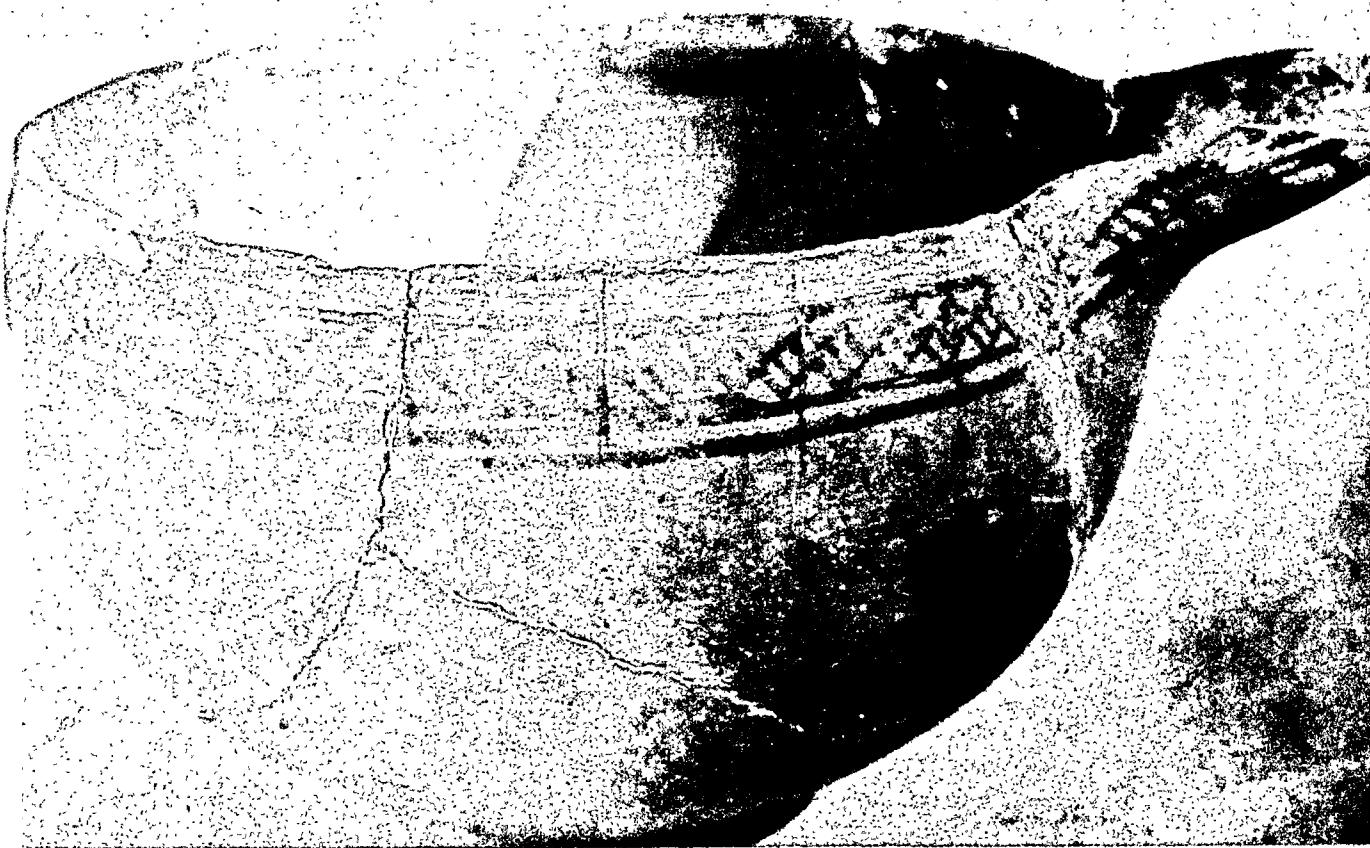
XVII b : Burnished Grey Ware  
from Shah Tepe, Iran  
(see p. 77)



XVII c : Mother Goddess with Bull  
from Inamgaon, Maharashtra  
(see p. 78)



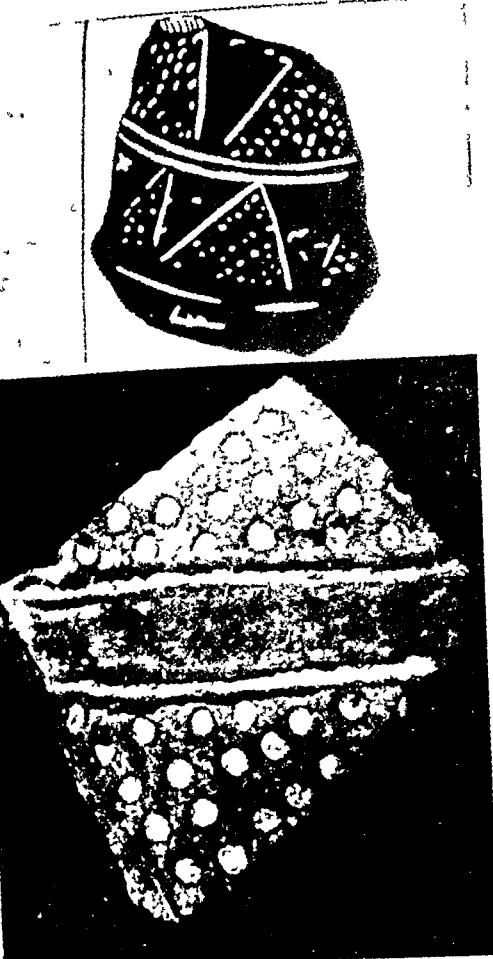
XVIII a : Head-rest of ivory from Tutankhamun's  
Grave, Egypt (see p. 78)



XVIII b : Channel-spouted bowl from Navdatoli,  
Madhya Pradesh  
(see p. 83)

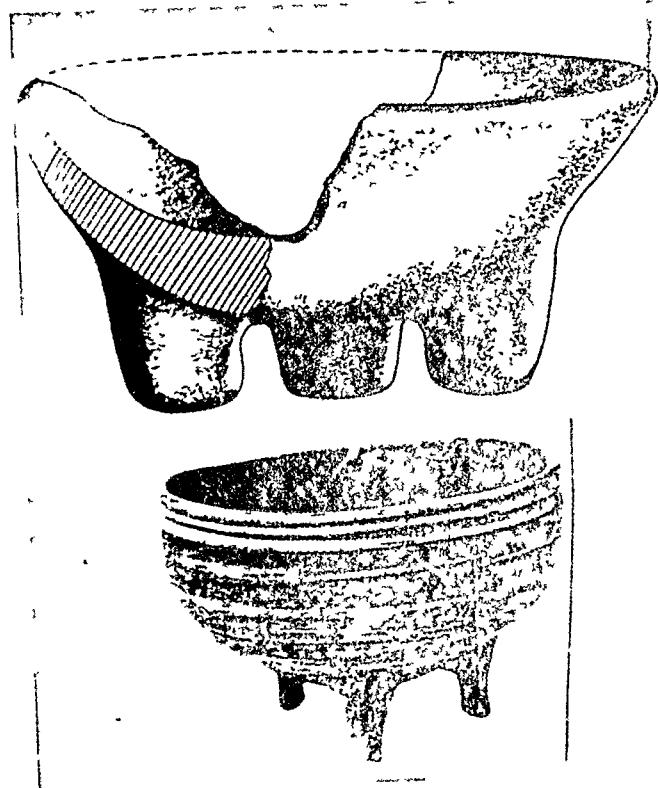


XVIII c : Channel-spouted bowls from Khurdi,  
Rajasthan (top) and Iranian sites (rest)  
(see p. 83)



XIX a : Punctured pot-snards with white filling from Navdatoli (bottom) and Crete (top)  
(see p. 85 & 87)

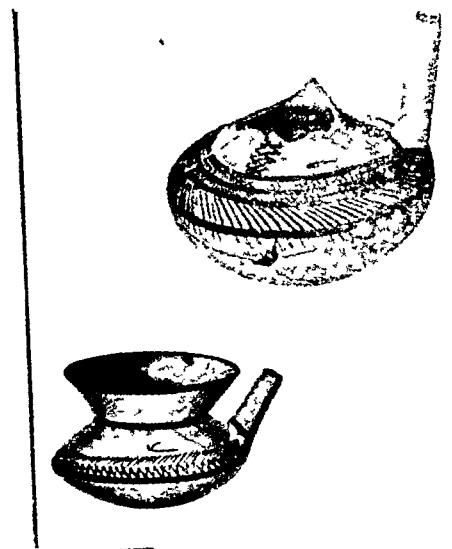
XIX b : Three-legged pots from Chandoli (top) and Giyan (bottom)  
(see p. 89)

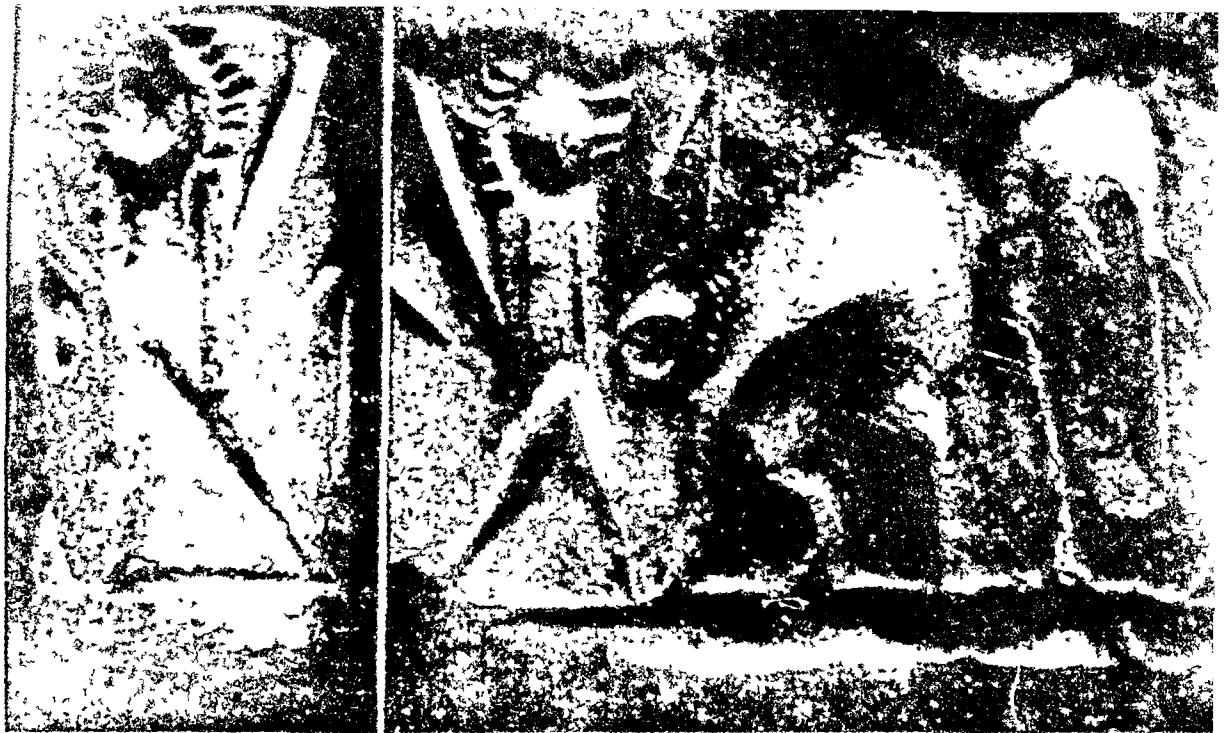


XIX c : Theriomorphic pot from Chandoli, Maharashtra  
(see p. 89)

XIX d : Theriomorphic pot from Silak, Iran

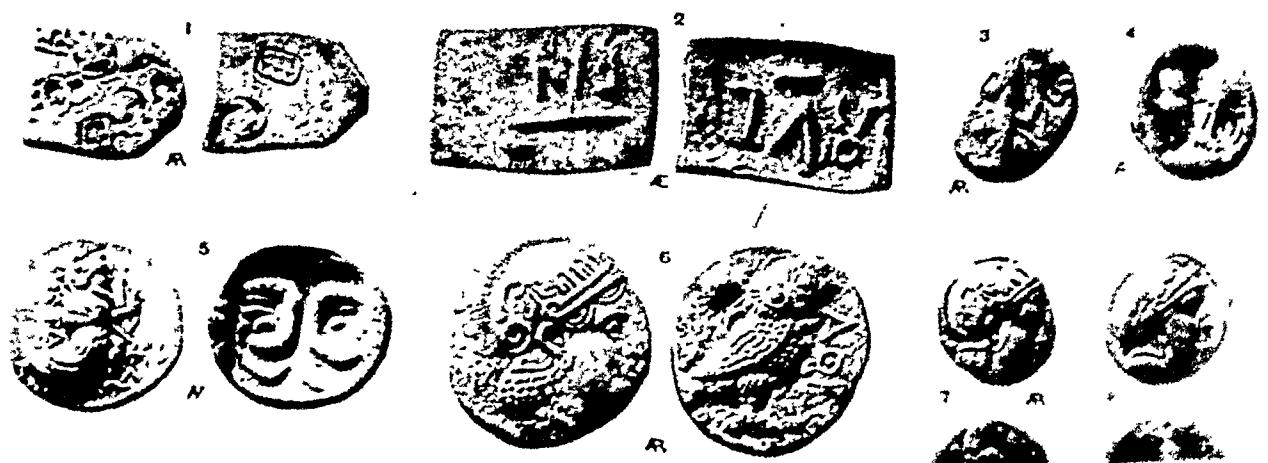
XX a : Spouted vessels from Jorwe, Maharashtra  
(see p. 89)



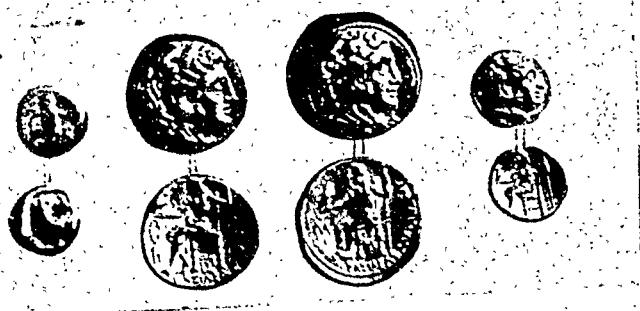


XX b : Cylinder Seal from Maski, Andhra Pradesh  
(see p. 90)

XXI a : Persian coins from Sind and Panjab  
(see p. 170)



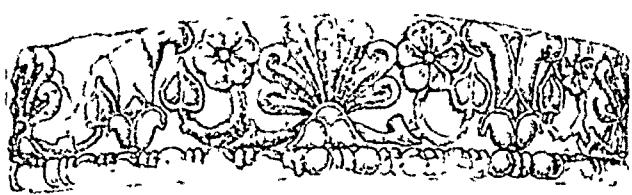
**XXI b** : Greek coins from Bhir mound, Taxila  
(see p. 180)



**XXII a** : Male head from Sarnath, Uttar  
(see p. 198)

**XXII b** : Male head from Sarnath  
Uttar Pradesh  
(see p. 198)





i SANKISA



ii ALLAHABAD



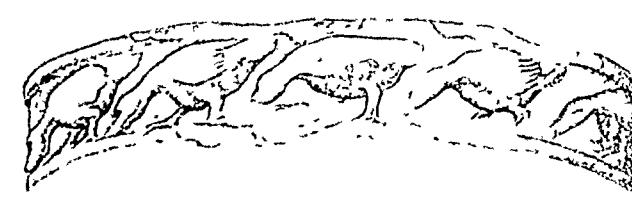
iii RAMPURVA BULL



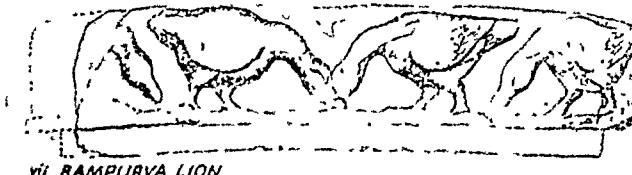
iv BASTI



v SANCHI



vi LAURIYA-NANDANGARH



vii RAMPURVA LION



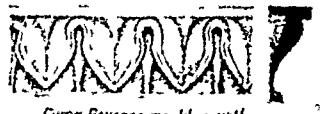
Base of a Column (restored). From the Archaic Temple of Artemis, Ephesus 550 B.C.



Ovolo moulding and ornament



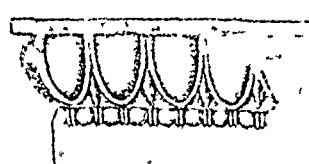
Cyma Recta moulding with anthemion ornament and ostragal moulding below



Cyma Reversa moulding with leaf and dart ornament



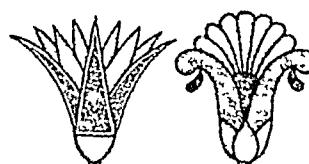
ii Mouldings and ornament of Greek architecture. The Cyma (Latin, cyma) is usually a frieze, or a cornice (cymatium)



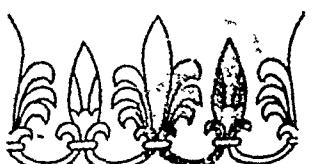
iii Ovolo ornament, with ostragal ornament below. The Siphnian Treasury, Delphi 6th century B.C.



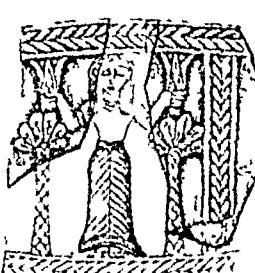
v Mature Greek anthemion. Sculptured Frieze from the north portico of the Erechtheion, Athens 420-393 B.C. (Section)



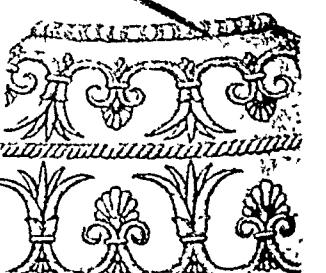
vi The Egyptian Lotus and Lily - typical conventional forms



vii The Assyrian knob-and-flower. From a fragment of fresco (restored)

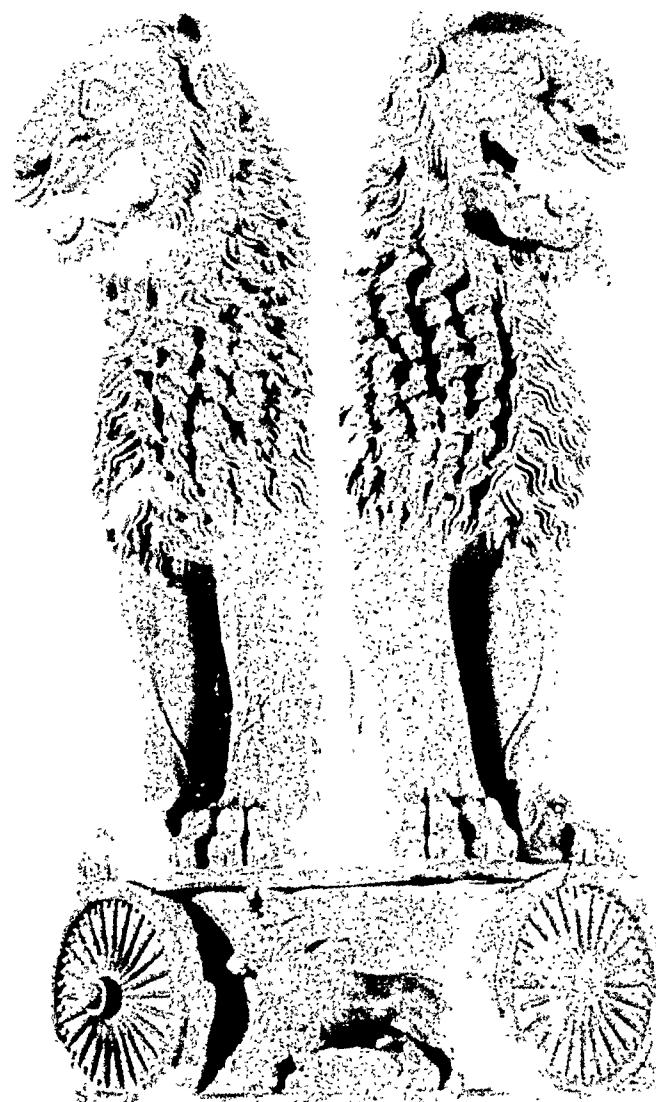


viii Ivory from Nimrud. Assyrian Found in the Palace of Sargon II (720-705 B.C.) The British Museum



ix Achaemenid anthemion Decoration on Armchair from Apadana, Silver gilt, glazed pottery, 5th century B.C.

XXIII a : Decorative motifs on Áśokan Pillars vis-a-vis decorative motifs from extra-Indian contexts  
(see p. 197)



XXIV a : Pillar Capital from Sarnath, Uttar Pradesh  
(see p. 196)



XXIV b : Lionhead from Ur, Al-Ubaid, Mesopotamia  
(see p. 196)

XXIV c : Persepolitan Capital, Iran  
(see p. 196)

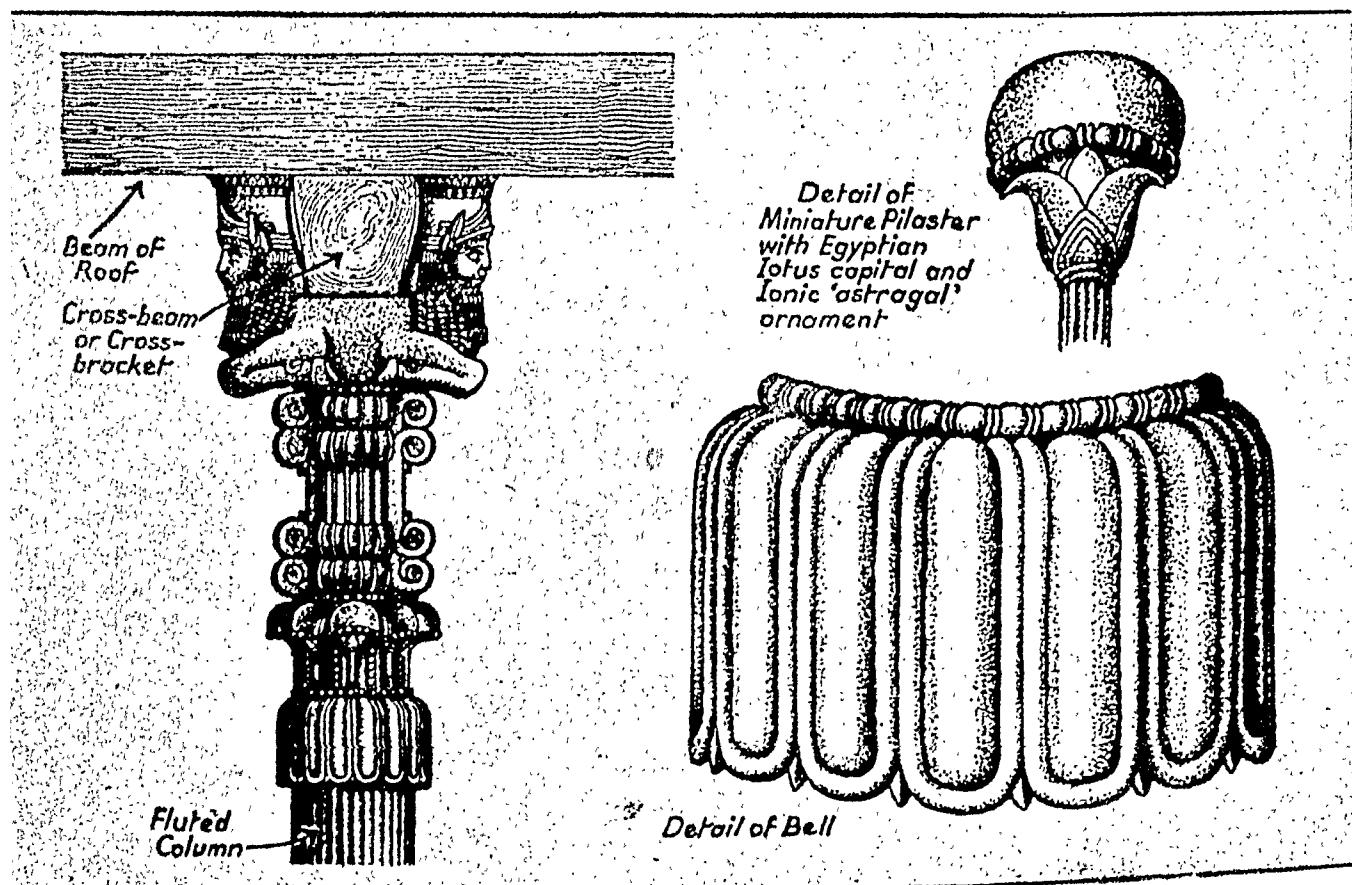
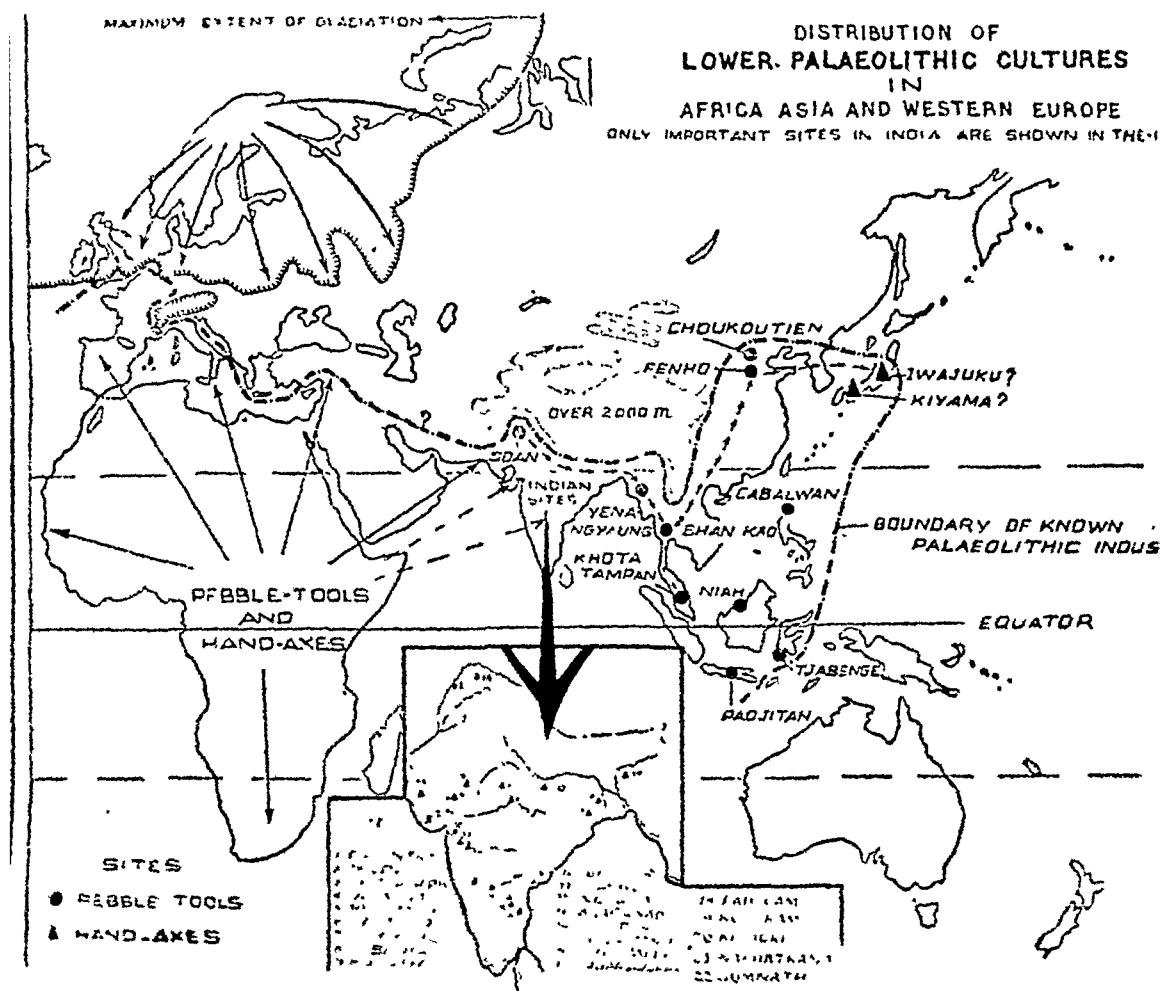


Fig. 1 : Map showing possible cultural contacts during the Old Stone Age (see p. 6)



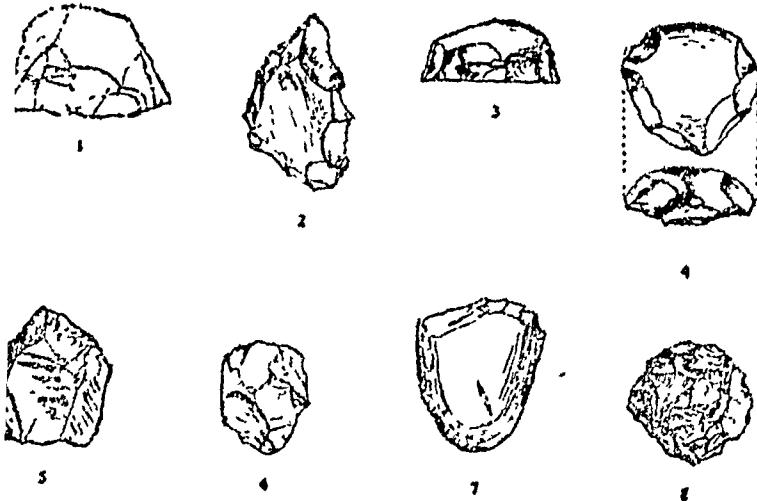


Fig. 2 : Chopper-chopping tools  
from Soan Valley (see p. 7)

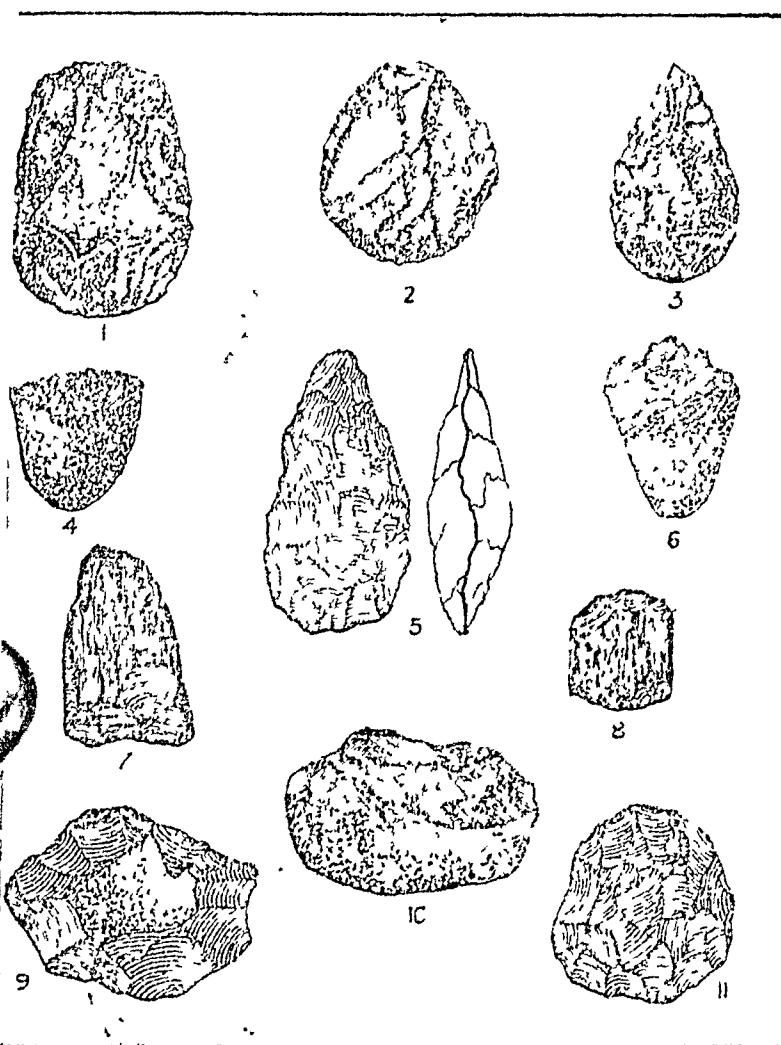


Fig. 3 : Hand axes from Indian sites  
near Madras (see p. 7)

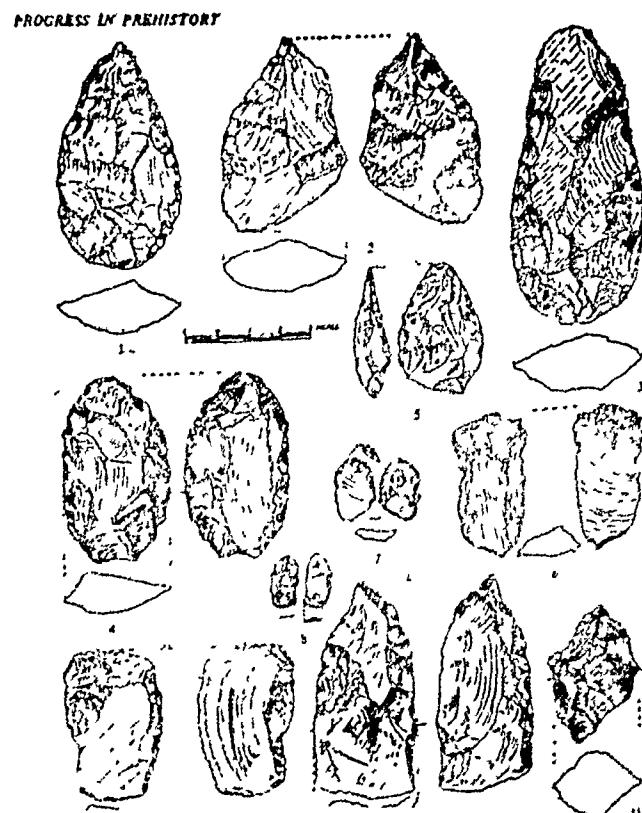


Fig. 4 : Old Stone Age tools from African sites  
(1 to 6) and South-East Asian sites  
(7 to 11) (see pp. 8 & 9)

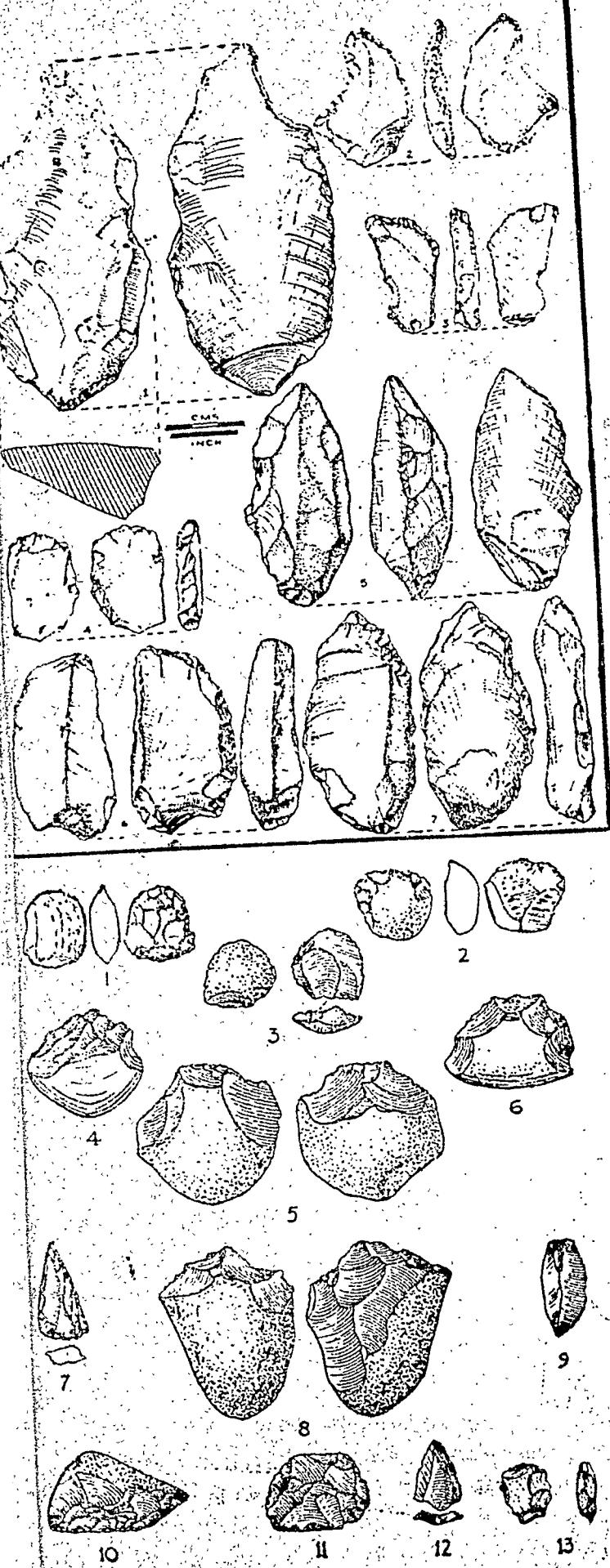


Fig. 5 (a) : Middle Stone Age tools from Indian sites (see p. 10)

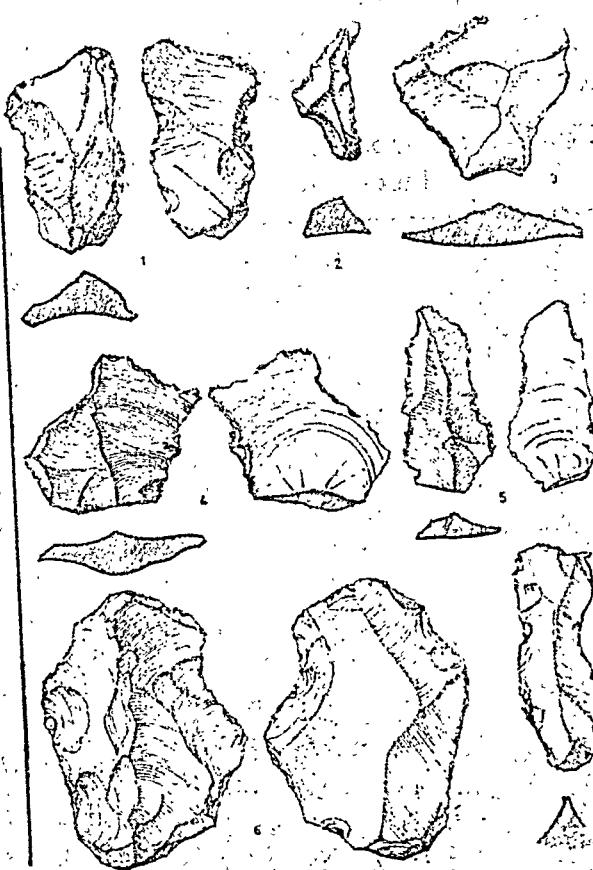


Fig. 5 (b) : Middle Stone Age tools from Hazar Sum, Afghanistan (see p. 10)

Fig. 6 : Middle Stone Age tools from Central India (see p. 10)

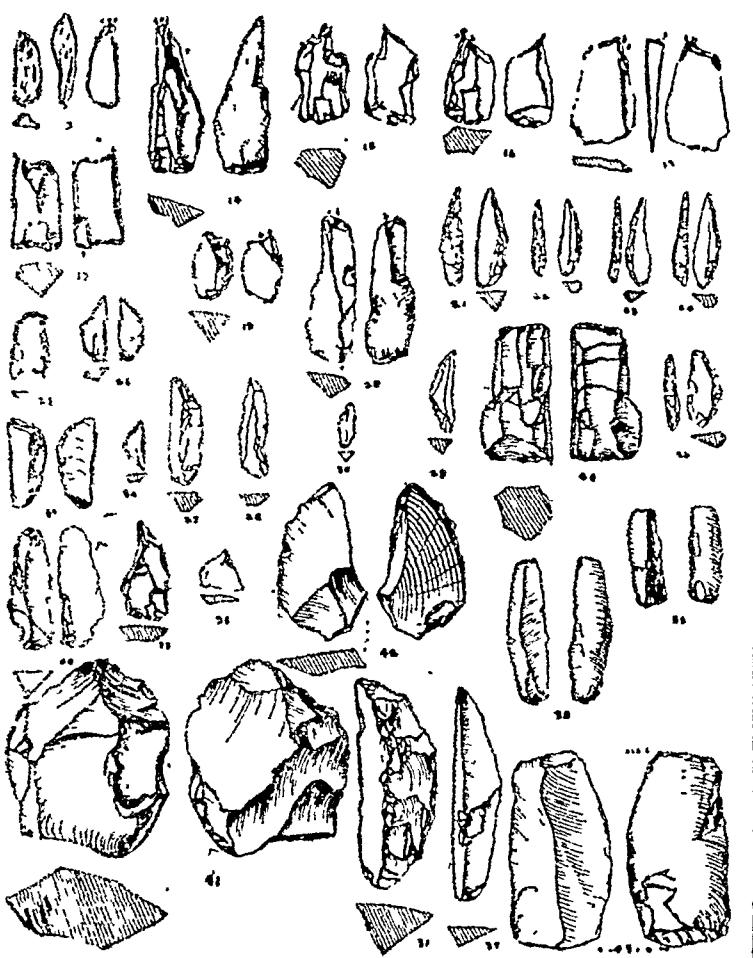


Fig. 7 (a) : Upper Palaeolithic tools from Indian sites (see p. 11)

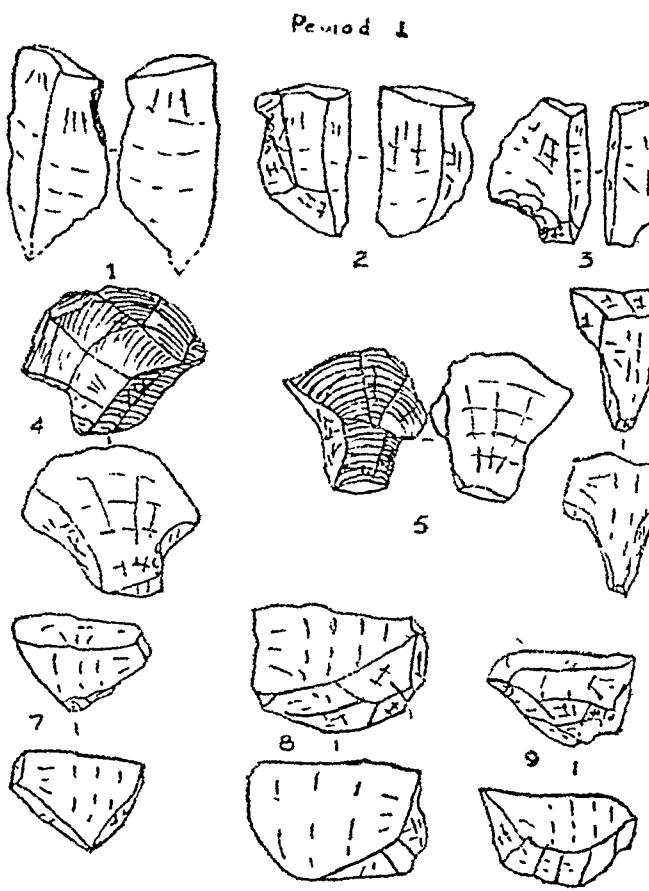


Fig. 7 (b) : Flake tools from Sanghao caves, Pakistan (see p. 10,220.)

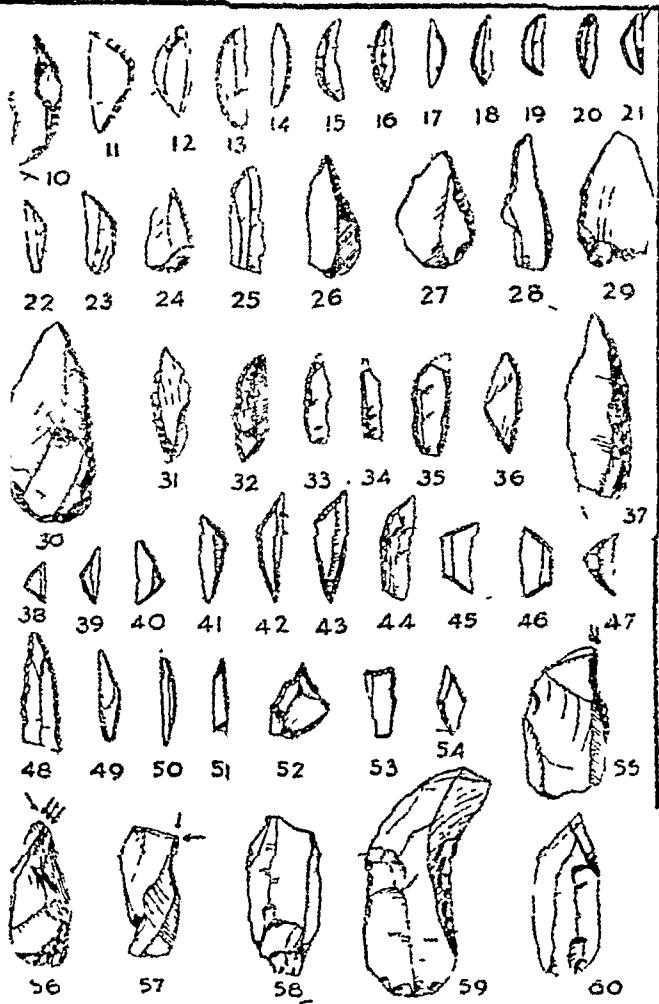


Fig. 8 : Microlithic tools from Indian sites, near Bombay (see p. 12)

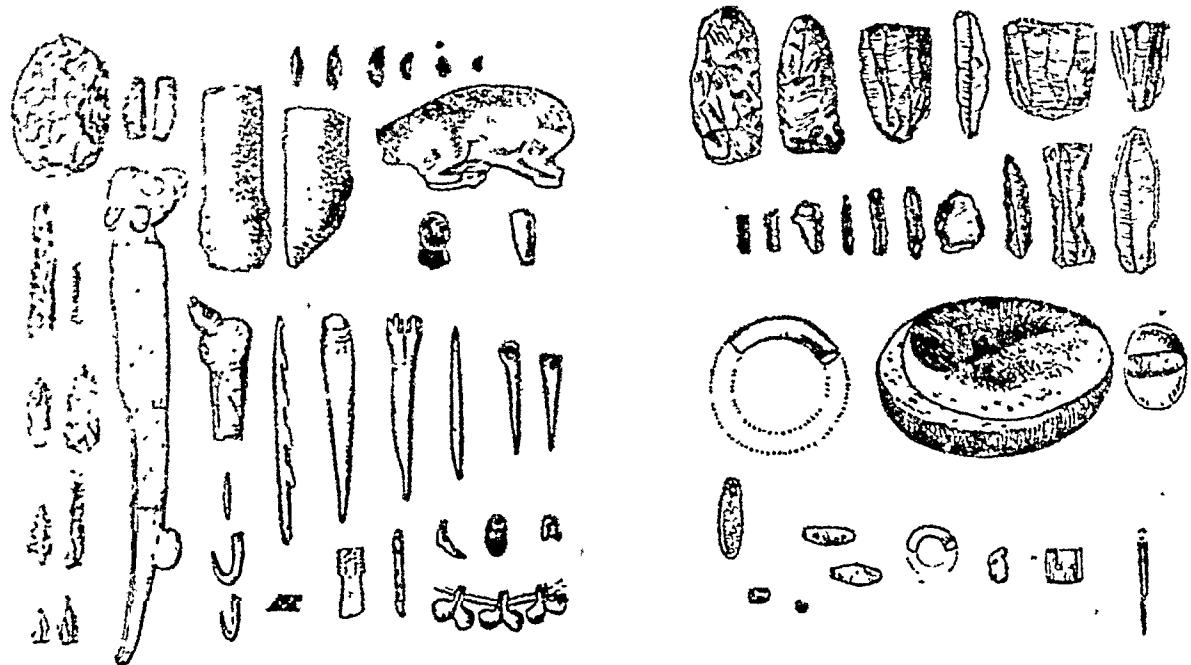


Fig. 9 : Mesolithic assemblage of Natufian Culture of Palestine (left) and of Iraq, Karim Shahir right (see p. 12)

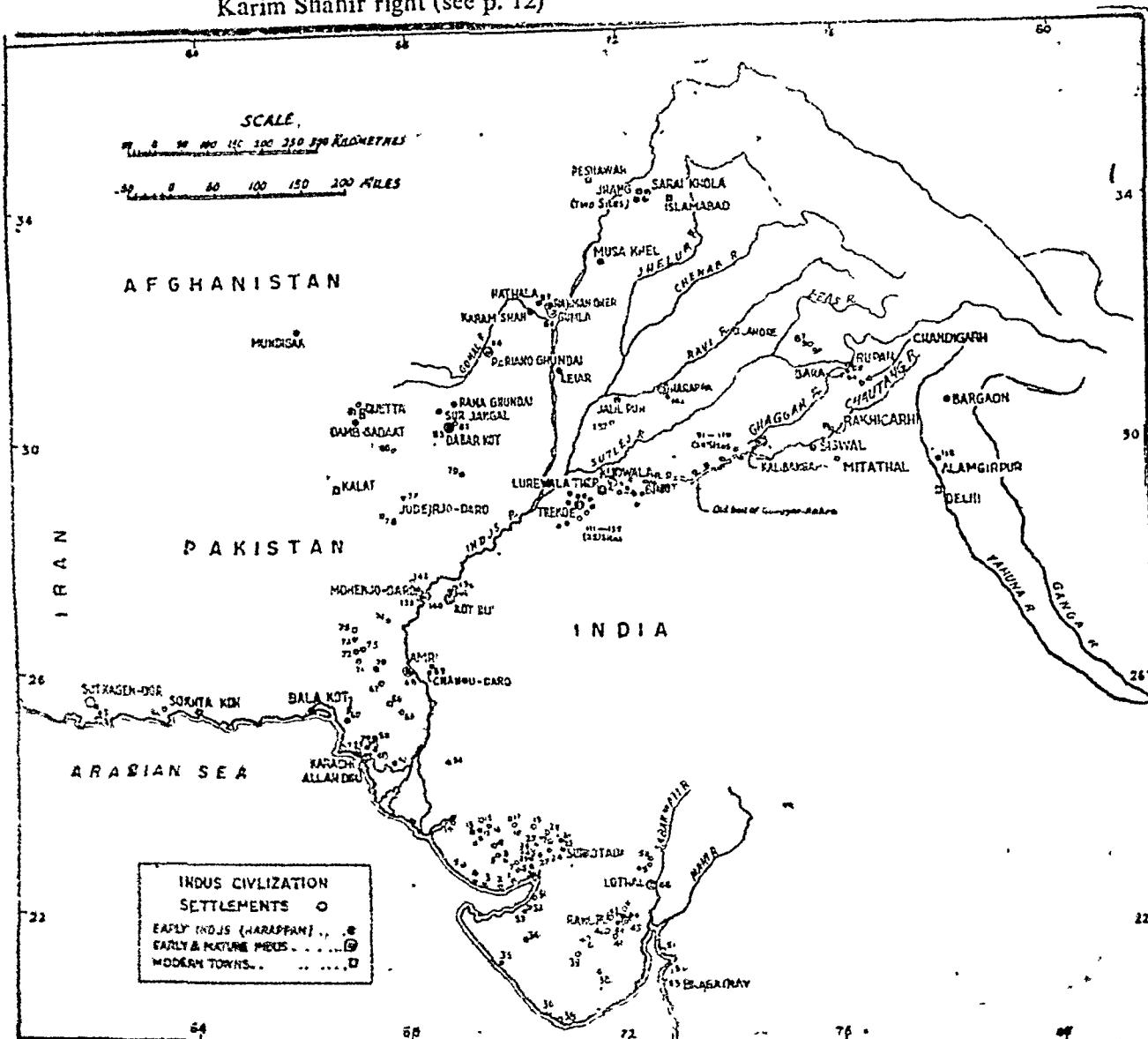


Fig. 10 : Map showing Pre-Harappan settlements of the Indus System and Baluchistan (see p. 15)

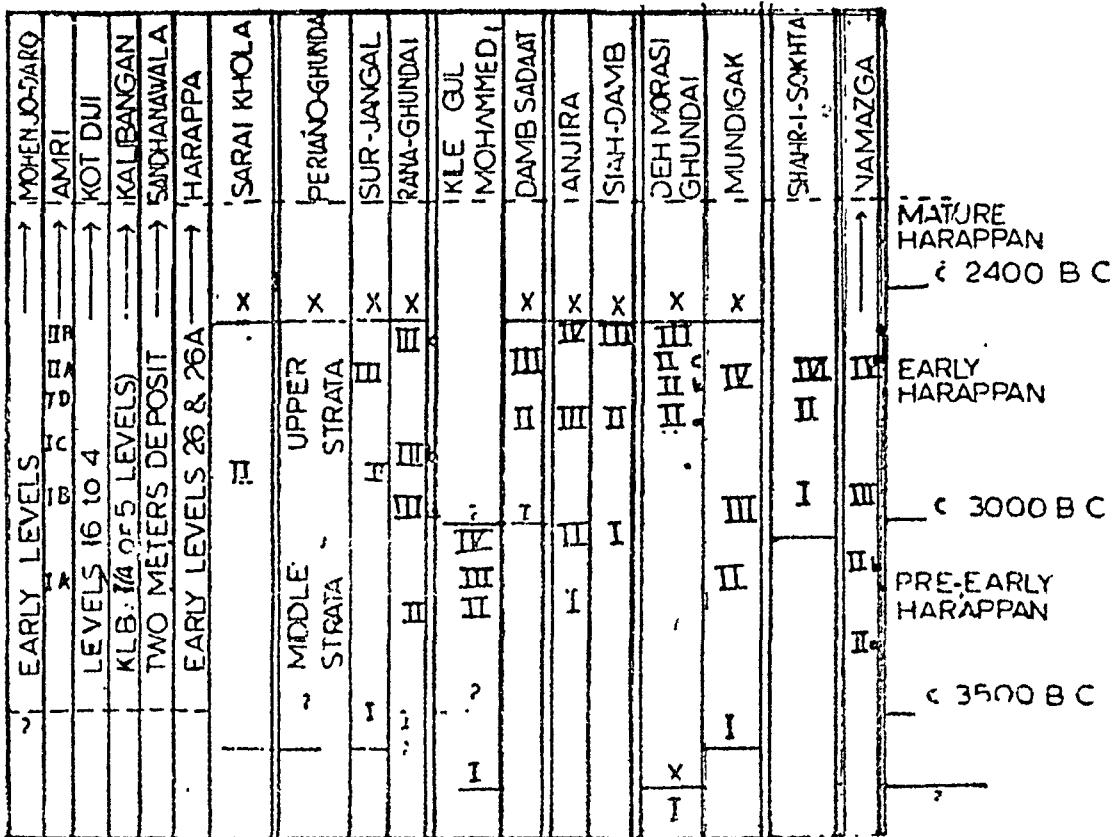
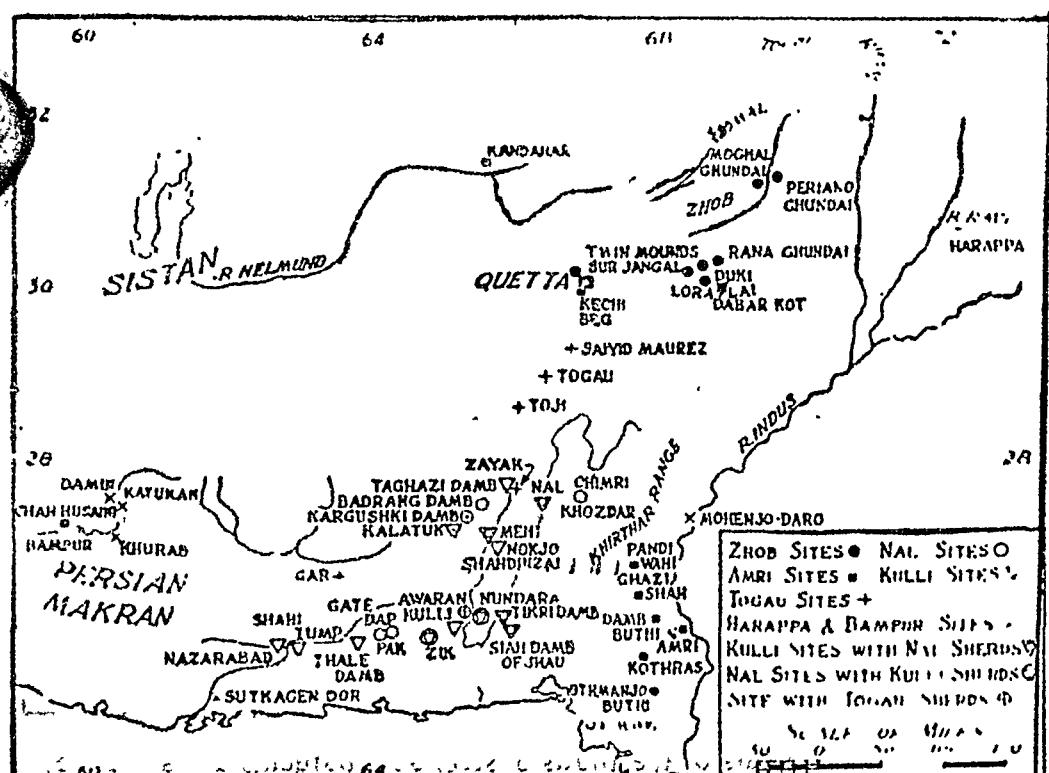


Fig. 11 : Chart showing chronological brackets of Baluchi cultures (see p. 15)

Fig. 12 : Map showing sites of important Baluchi cultures (see p. 16)



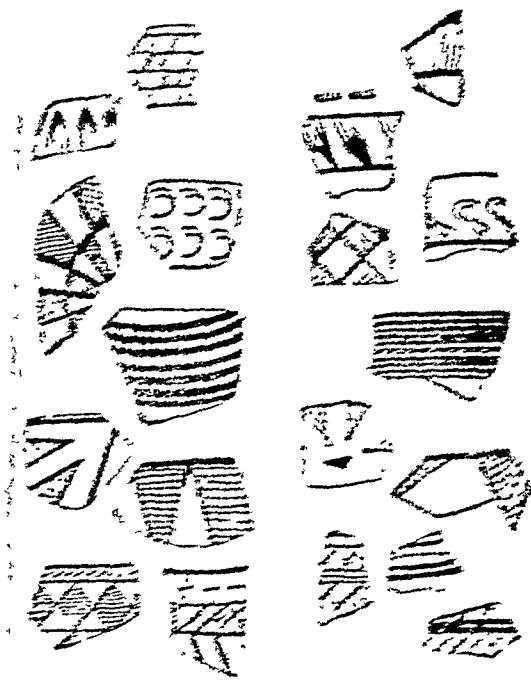


Fig. 13: Typological similarities of Painted Pottery designs from northern Iran (Caspian AE Culture, and Is Balaqizan Tepeh Culture) (see p. 2)

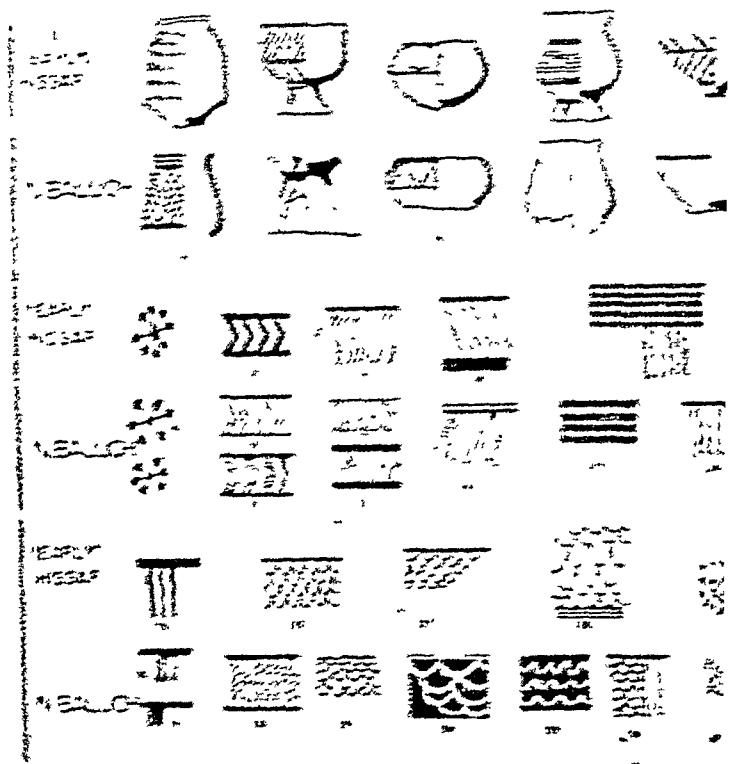
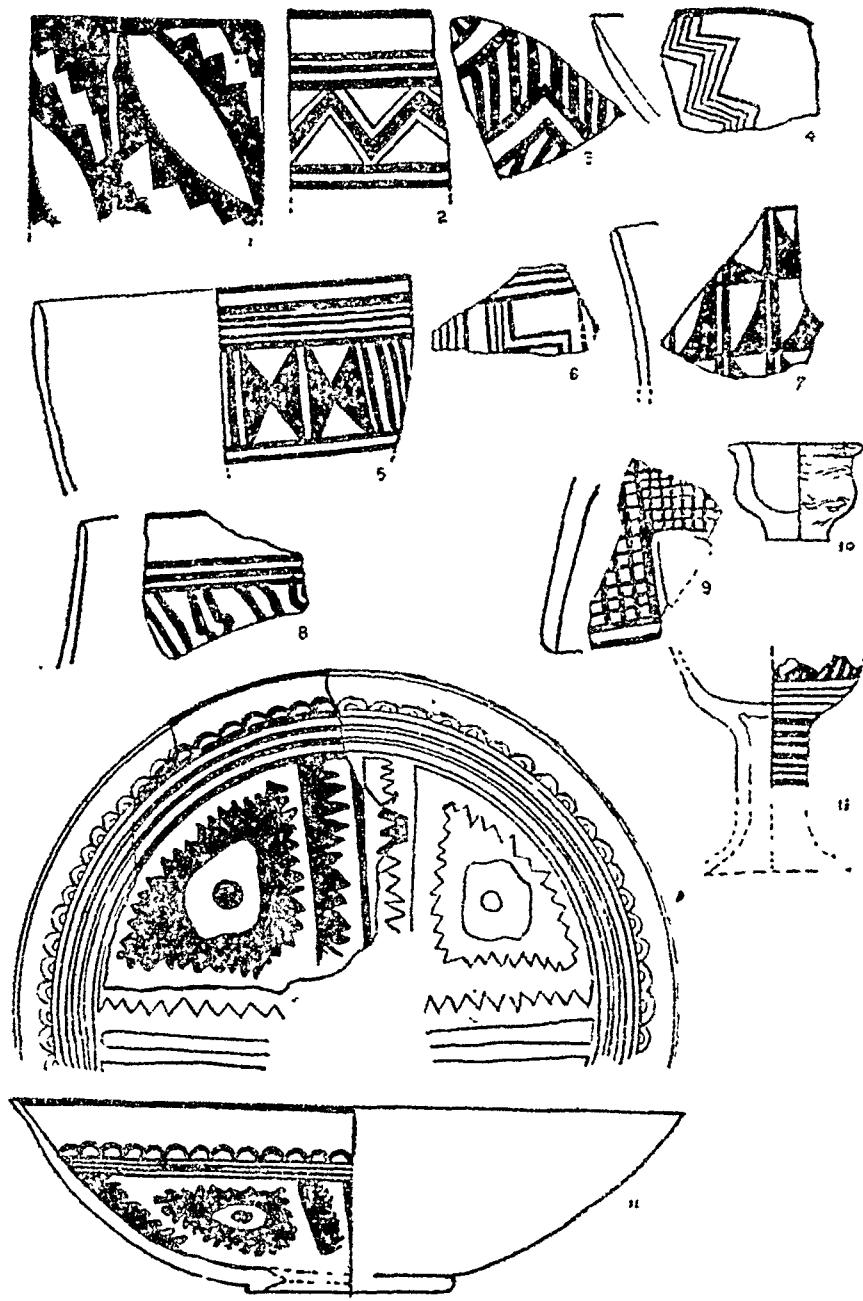


Fig. 14: (see p. 22)

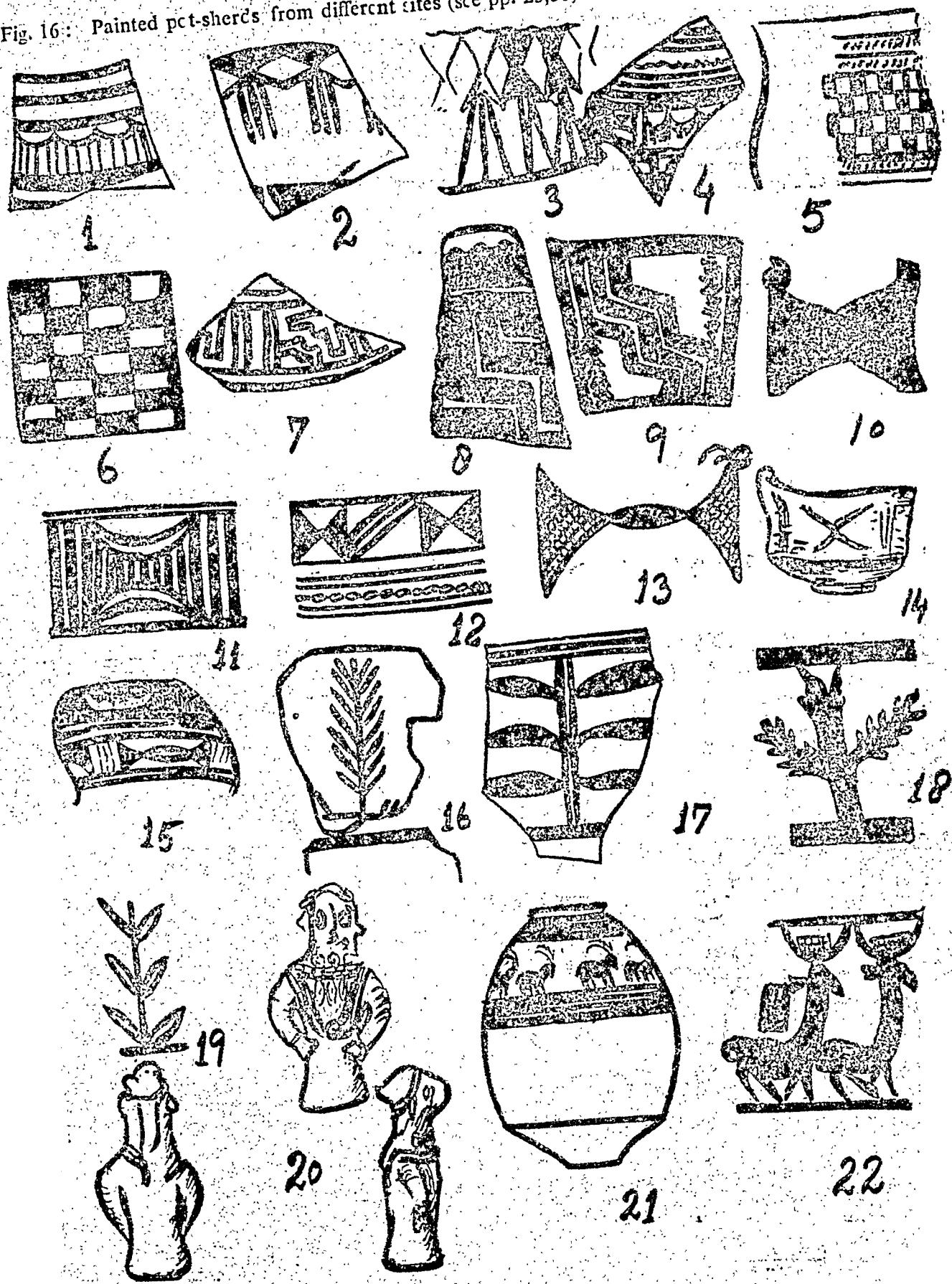
\* Regional similarities of painted pottery designs found in Is Balaqizan Tepeh culture and in northern Baluchistan (Qurru Lousar). The Iranian material is generally from Saka II/II<sub>1</sub> and III. The Baluchi material is generally from RGM VI or CS II.



1. Diagonal stepped motif
2. Thick and thin chevron motif
3. Vertically hatched chevron motif
4. Thin chevron or zig-zag line motif
5. Opposed triangles pattern
6. Thin-line step pattern
7. Diagonally divided squares
8. Degenerate thin-line step
9. Fragment of a perforated foot-stand
10. Alabaster cup
11. Shallow bowl
12. Stemmed goblets

Fig. 15 : Painted pottery from Quetta Region (see pp. 22-24)

Fig. 16: Painted pct-sherd's from different sites (see pp. 23, 30, 3)



1. Loop with suspended lines from Amri
2. Loop with suspended lines from Samarra
3. Loop with suspended lines from Tell Halaf
4. Loop with suspended lines from Indus Valley
5. Checker board design from Amri
6. Checker board design from Ur
7. Step motif (Amri) from Dam Bhuti
8. Step motif (Amri) from Pandi Wahi
9. Step motif from Susa I

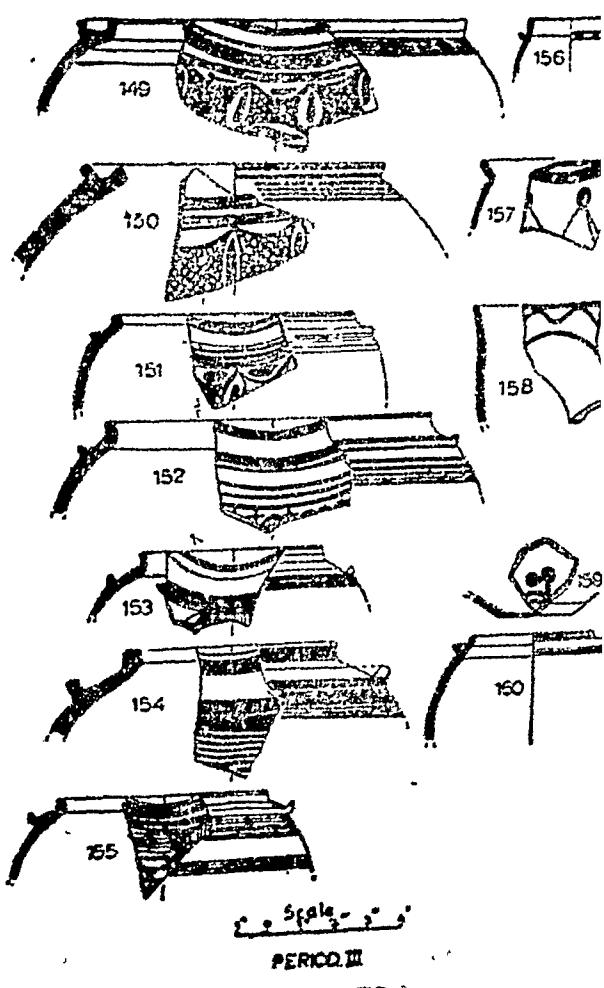
- 10-11. Opposed triangles motif—Jamdat Nasr
- 12-14. Opposed triangles, crete, Early Minoan
15. Opposed triangles, Honan, China
- 16-17. Tree motif, Quetta
- 18-19. Tree motif, Jamdat Nasr
20. Figurines, Kulli
21. Animal friezes, Sialk III
22. Animal friezes, Ninevite V Pottery

Details of Fig. 16

Fig. 17 : Painted Pottery from Gumla II  
(see p. 26)



Fig. 18 : Pottery from Gumla III  
(see p. 26)



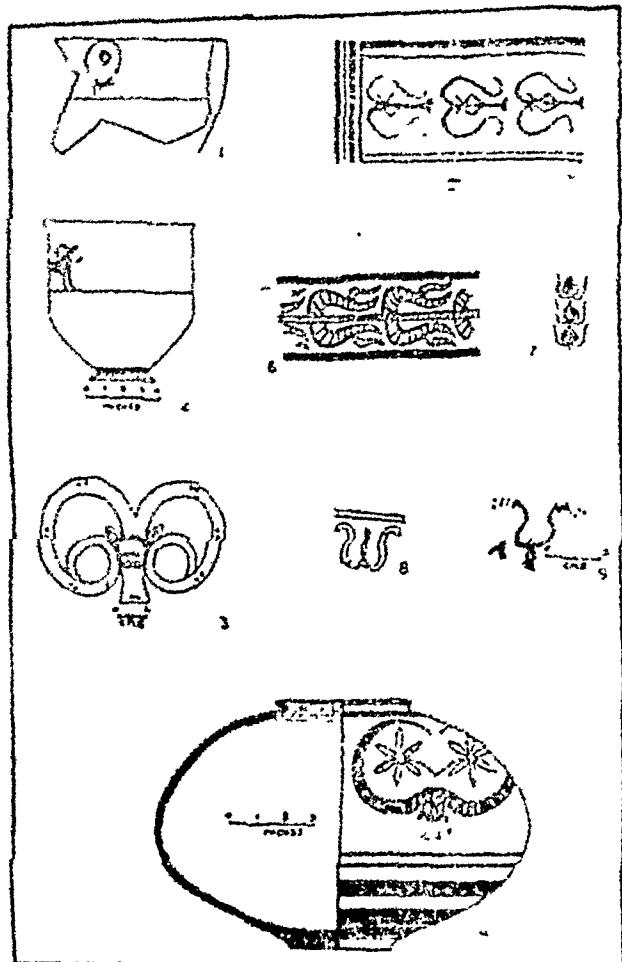


Fig. 19 : The Buccranian (bull or wild sheep horn) motif (1-3, 5-9 Iran and West Asia  
4—Kot Diji) (see p. 26)

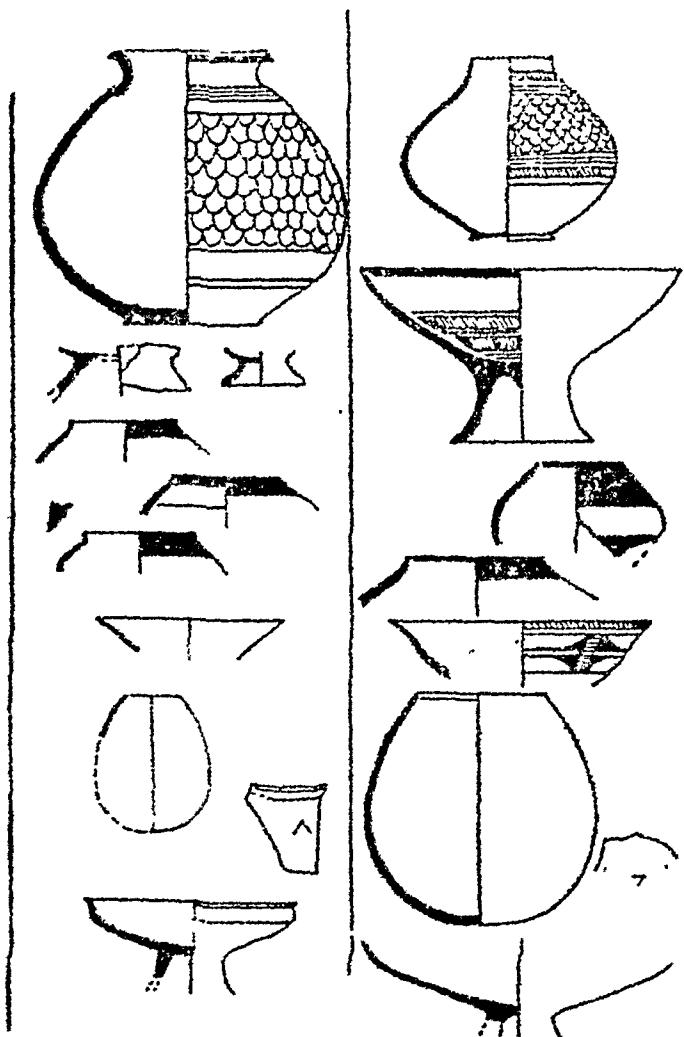


Fig. 20 : Different Designs and shapes of Pottery from Kot Diji (left) and Amri (right)  
(see p. 26)

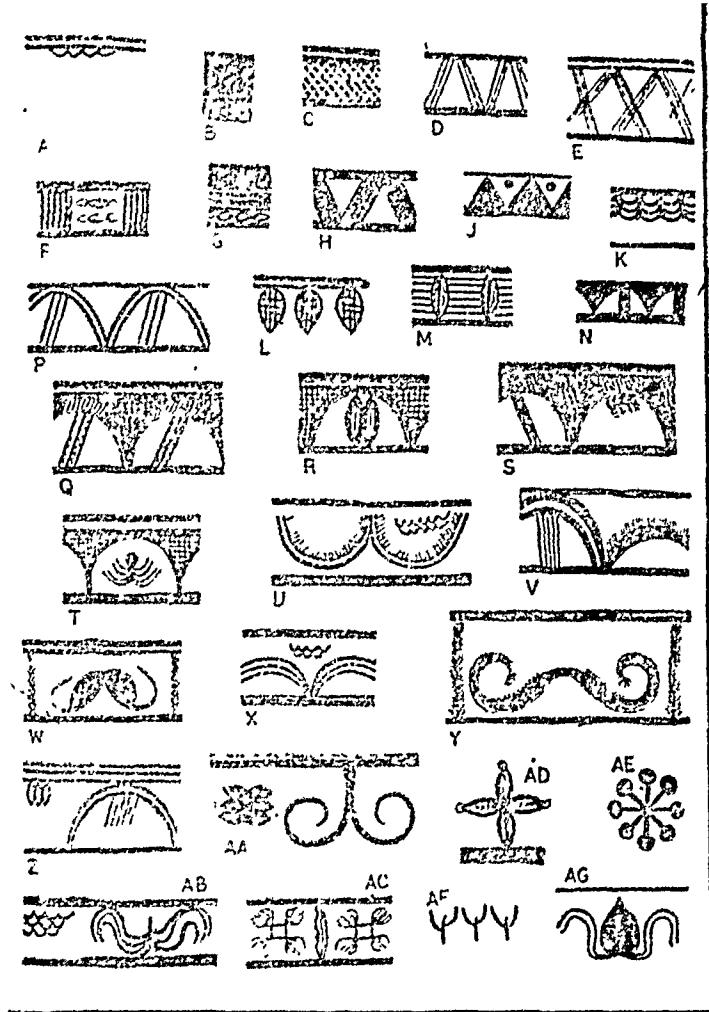


Fig. 21 : Pre Harappan Painted designs on pots from Kalibangan (see p. 26)

Fig. 22 : Bowls painted with cattle and black buck, Rana Ghundai, Phase II (see p. 28)

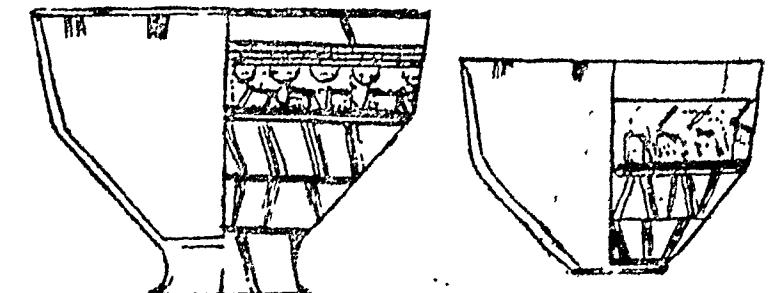


Fig. 23 : Typological similarities of painted pottery designs and seals found in northern Iran (Middle Hissar culture) and in northern Baluchistan (Quetta, Zhob Loralai) (see p. 28)

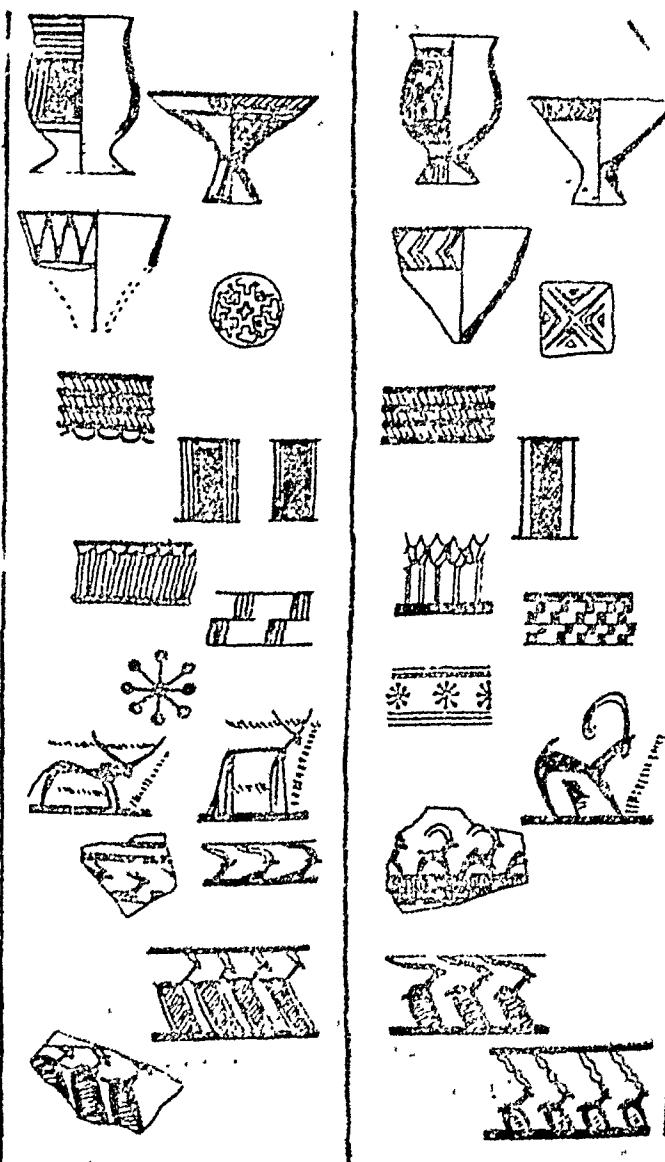




Fig. 24 : Painted pottery from Nal  
(see p. 30)

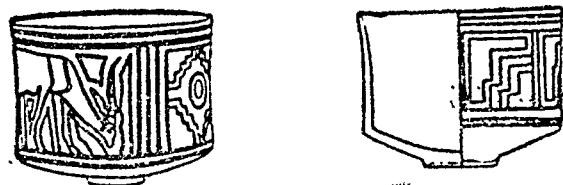
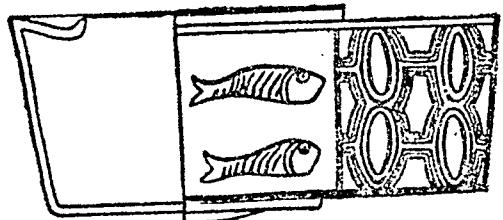


Fig. 25 : 'Animals in landscape' motifs on Kulli Ware (see p. 33)



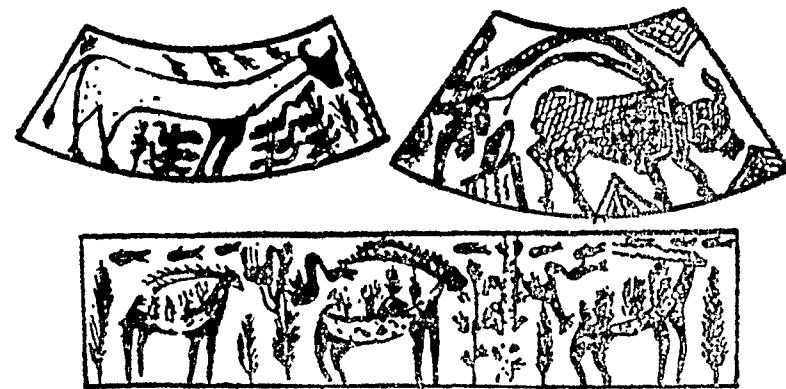
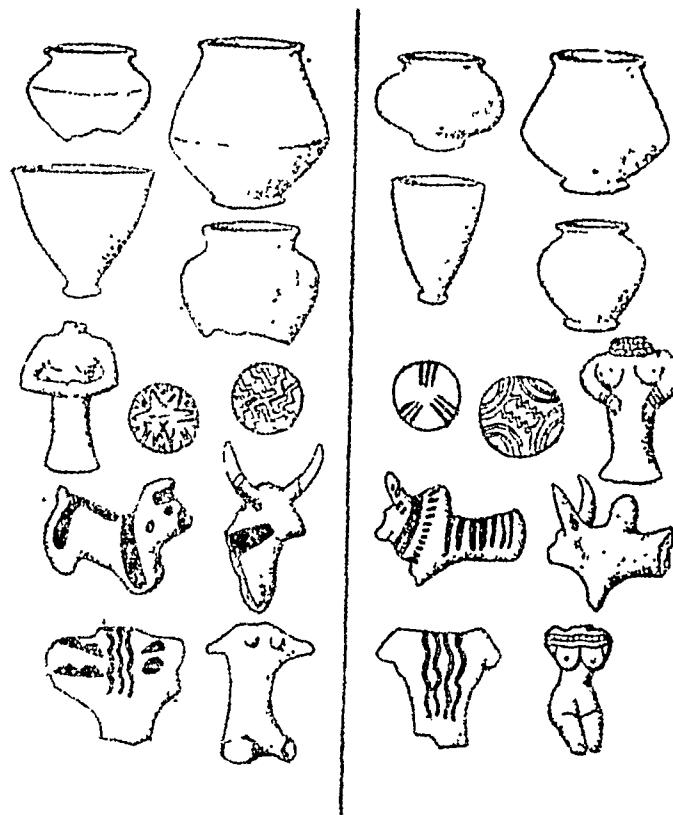


Fig. 26 : 'Animals in Landscape' motifs on early Dynastic scarlet ware from Susa and the Diyala region (see p. 33)

Fig. 27 : (see pp. 34 and 36)



*Comparative typology of pottery and other artifacts of Bakun A: southwestern Iran, and Bampur-Makran, southeastern Iran. The Bampur-Makran material (right) is largely of the Khurab phase, with some Kulli. The female figure with extended legs is of Damb-Sadaat II affiliation.*

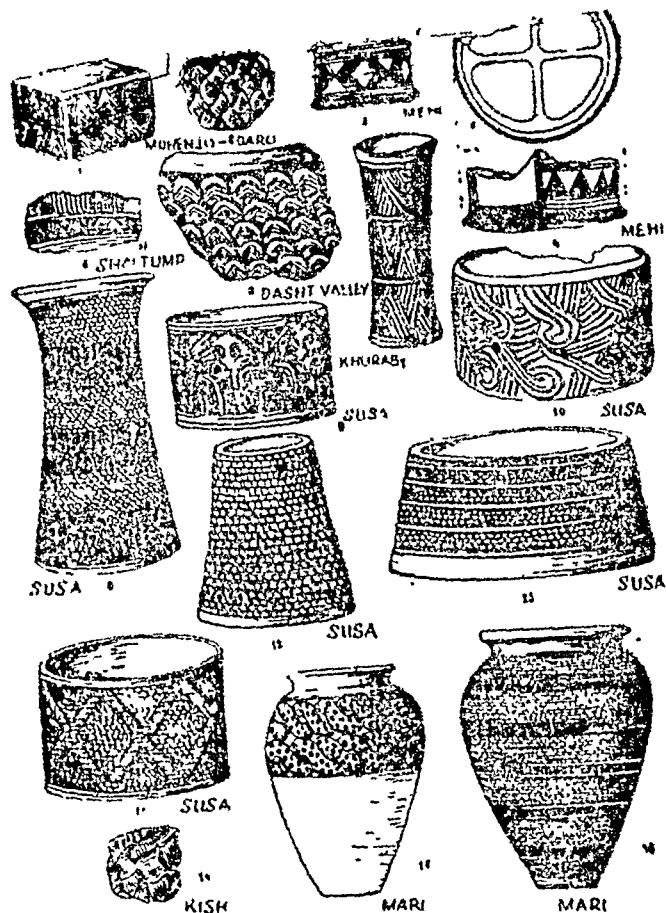


Fig. 28 : Carved stone Vases from Pakistan,  
Baluchistan and West Asia  
(see pp. 34, 65)

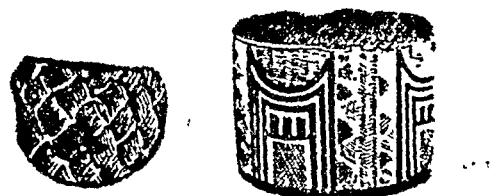


Fig. 29 : Carved stone vases from  
Mohenjo-daro & Khafajah  
(see pp. 34 and 65)

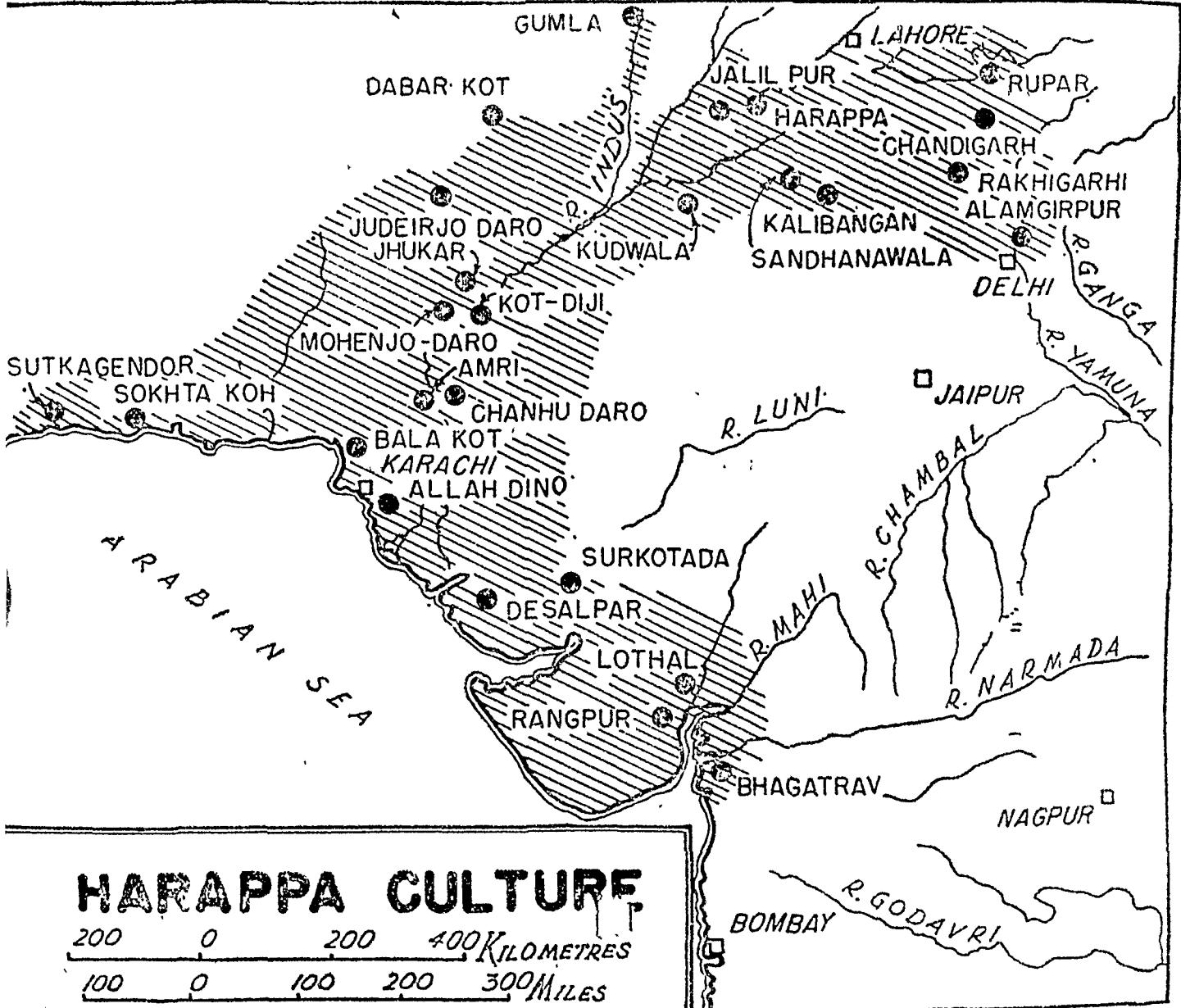
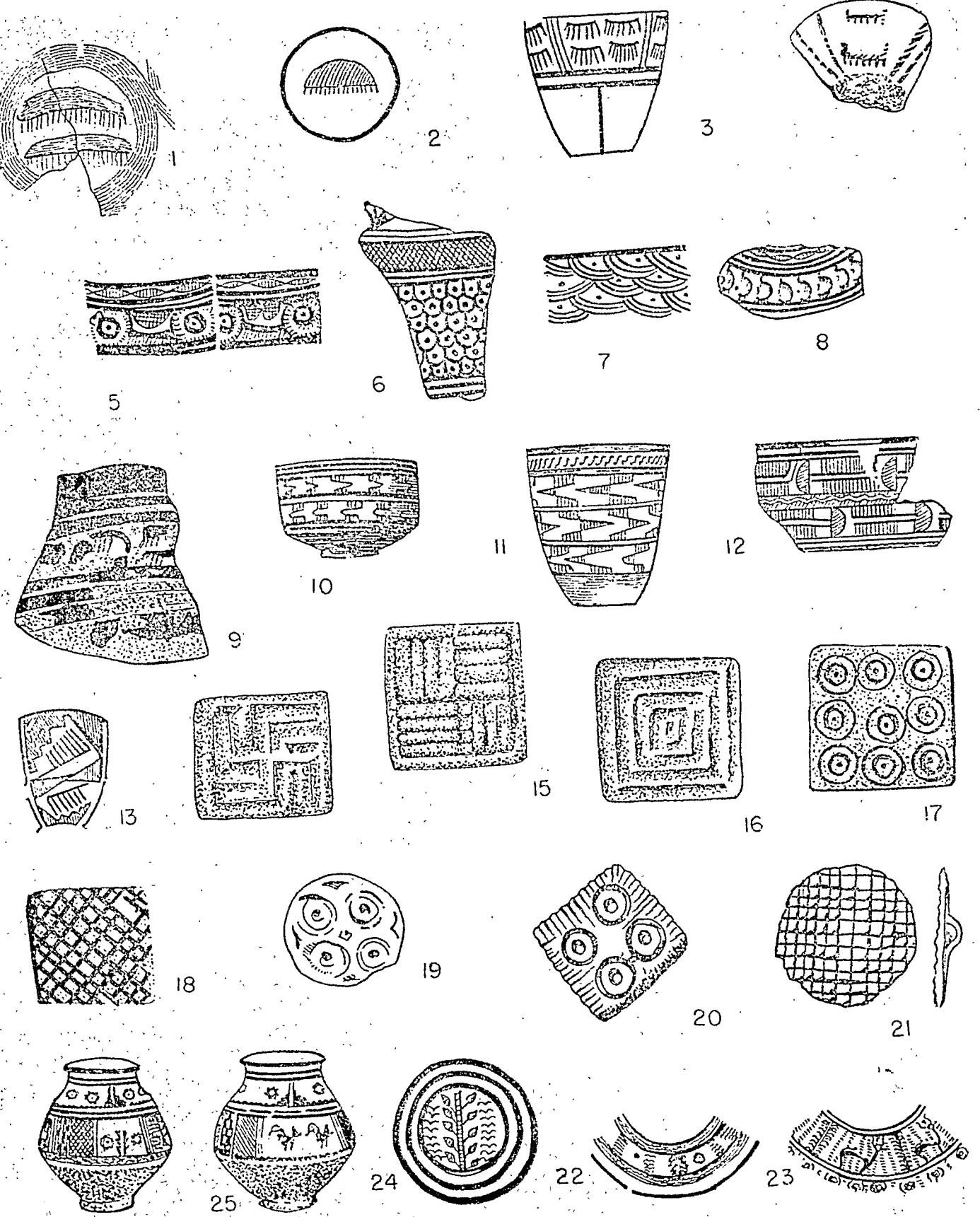


Fig. 30 : Map showing principal sites of the Harappa civilization (see p. 38)



Details on next page

Fig. 31. Pottery Designs and Seals (see pp. 43, 44, 63, 103)

- (1) Comb pattern, Tell Halaf ; (2) Comb pattern, Tepe Gawra, (3) Comb pattern, Sialk (4) Comb pattern, Harappa, (5) Comb pattern, Mohenjo-daro, (6) Fish-scale pattern, Mohenjo-daro (7) Fish-scale pattern, Tell Halaf, (8) File design, Mohenjo-daro (9) File design, Chanhudaro (10) File design on a pot, Nal (11) File design on a pot, Susa I, (12 & 13) File design on a pot, Persepolis, (14) Swastika on a seal, Mohenjo-daro, (15) Swastika of a different variety on a seal, Harappa, (16) Square on a seal, Mohenjo-daro, (17) Circles on a seal, Harappa, (18) Cross on a seal, Harappa, (19) Button seal, Tepe Hissar, (20) Button seal, North Syria, (21) Button seal, Chagar Bazar, (22-24) Plants or trees equivalent to the tree-of-life, 'Cemetery H', Harappa, (25) Painted jars, Tepe Giyan.

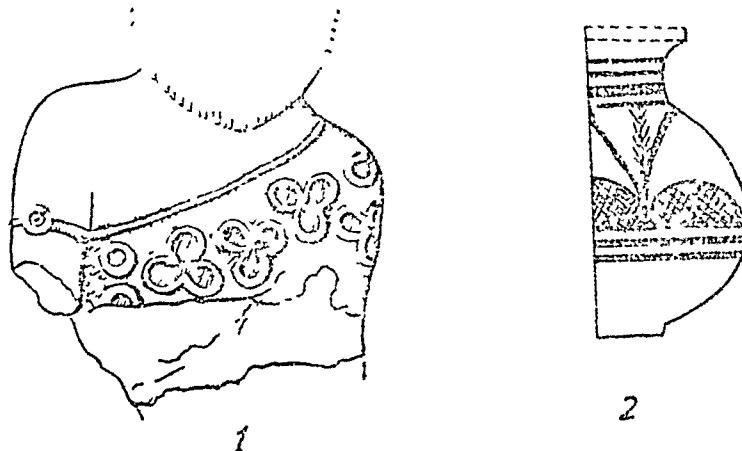
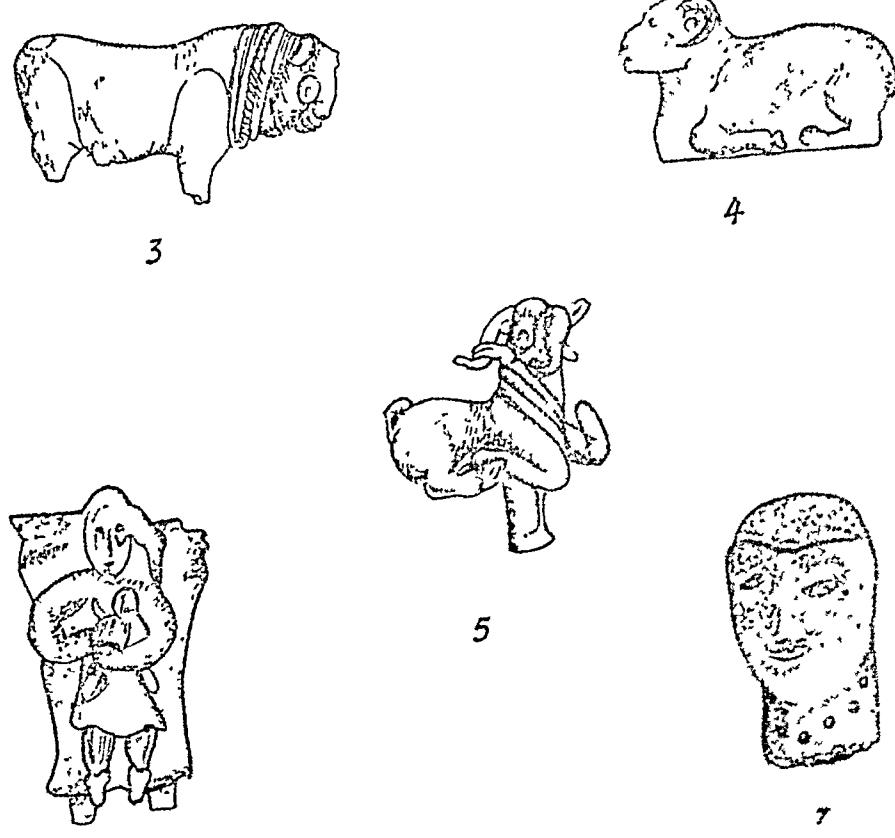


Fig. 32: Harappan motif and animal toys (see pp. 44, 47, 48, 50, 55)

- (1) Trefoil pattern
- (2) Tree pattern
- (3) Short horned bull
- (4) Ram
- (5) Goat
- (6) Reclining figure with model bed
- (7) Stone head, Dabar Kot



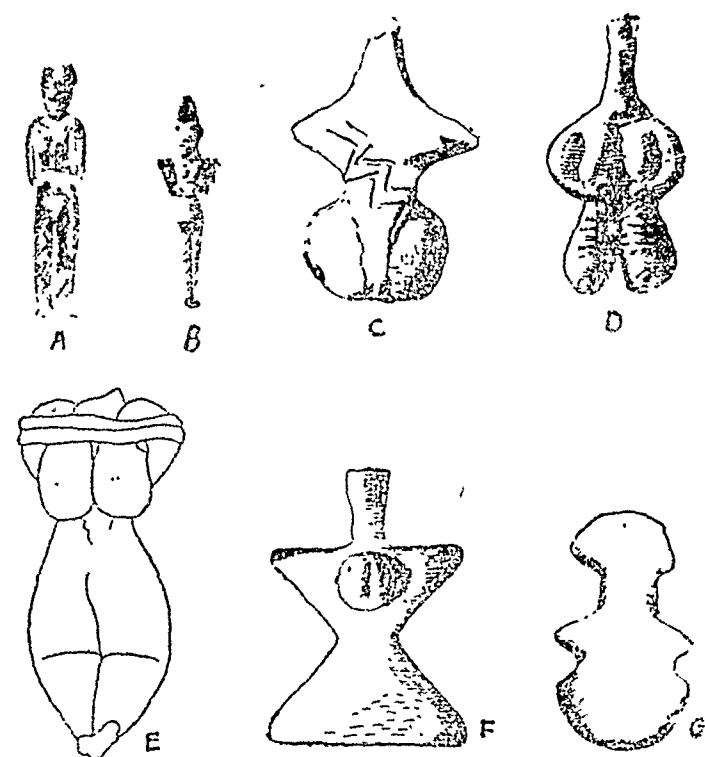


Fig. 33: A-Mother goddess from Egypt  
 B- " " Sumer  
 C- " " Crete  
 D- " " Tell Halaf  
 E- " " Quetta  
 F- " " Tepe Hissar  
 G- " " Tepe Gawra  
 (see pp. 45, 46)

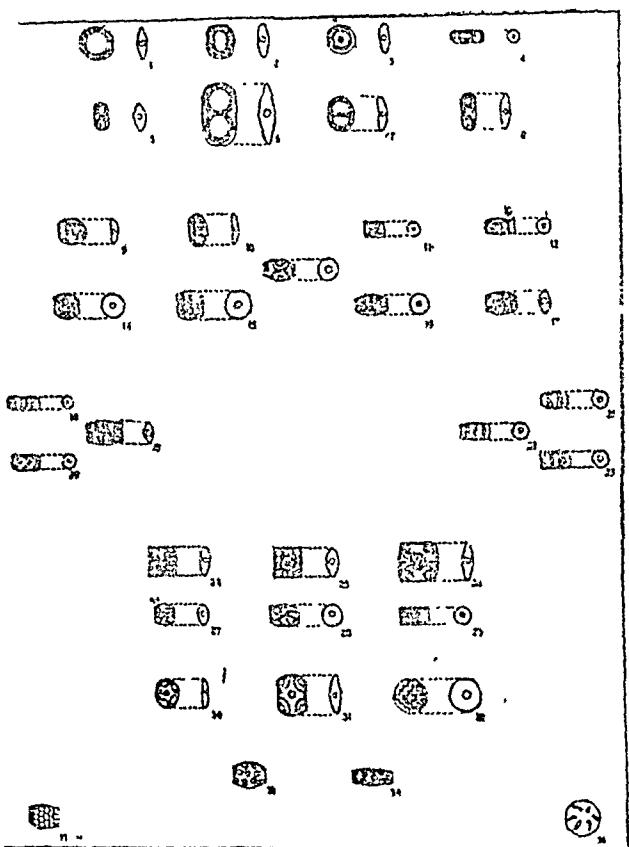


Fig. 35 : Etched carnelian beads from Mesopotamia and the Indus Valley (see p. 57)

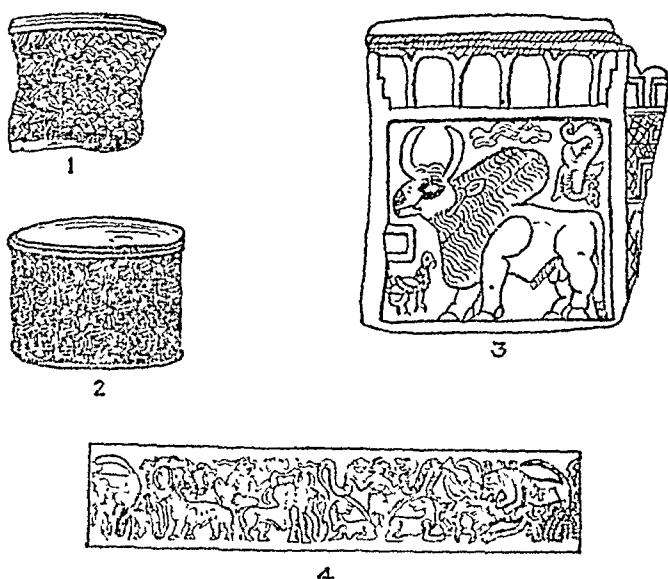


Fig. 34: A decorated cylindrical vase from Khafajah showing Indian motifs (see p. 54)



Fig. 36: Different kinds of beads from Indus sites (see p. 57)

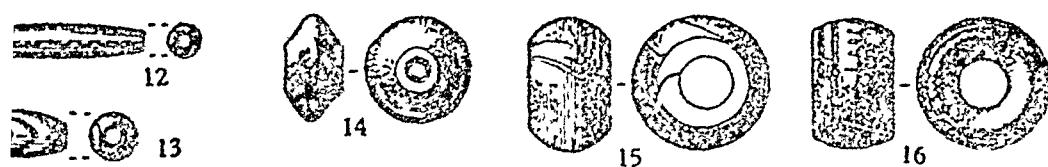


Fig. 37: A-Scene of Bull-fight, Harappa  
B-Scene of Bull-fight, Crete  
C-Seal, Mohenjo-daro  
D-Dance scene, Harappa  
E-Dance scene, Iran  
F-Dance scene, Crete  
(see pp. 60, 62)

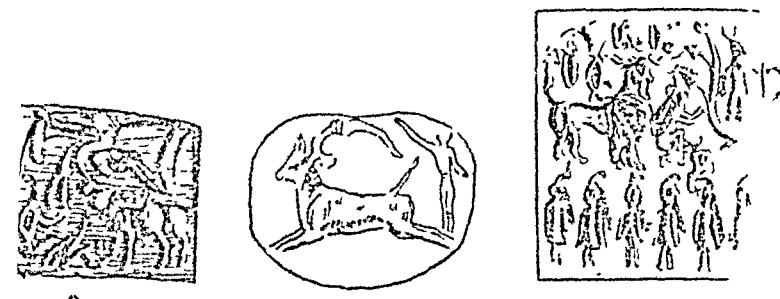


Fig. 38: A-Scene of hunting, Mohenjo-daro  
B-Scene of hunting, Susa  
C-Scene of hunting, Crete  
(see p. 61)

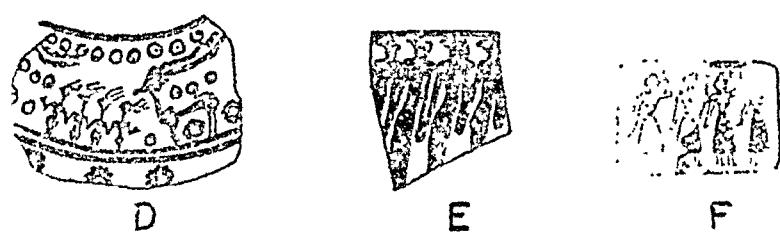
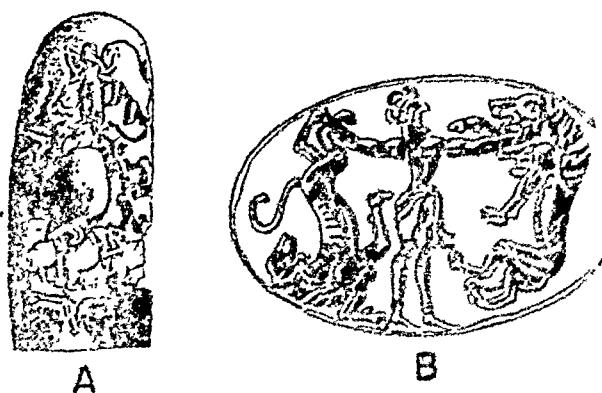


Fig. 39: A Tiger Hero, Egypt  
B Tiger Hero, Crete  
(see p. 65 F.N. 1)



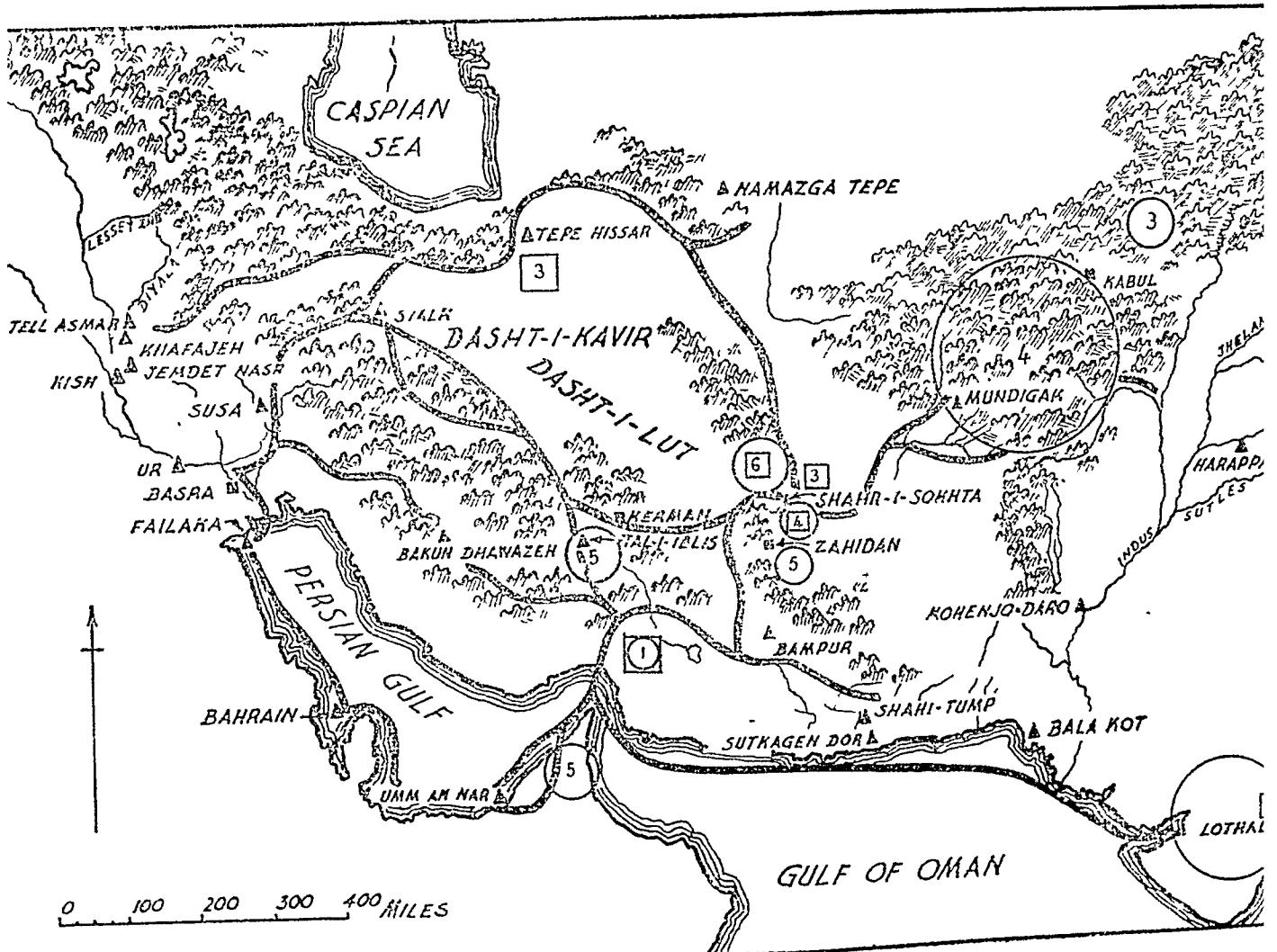


Fig. 41 : Trade routes and local resources on the Iranian Plateau and Surrounding areas. Numbers indicate major resources of inscribed areas: (1) steatite (3) lapis lazuli (4) carnelian (5) copper; The inscribing circle marks the present availability of the mineral, the square marks the archaeological evidence for working and trans-shipping area. (see p. 67)

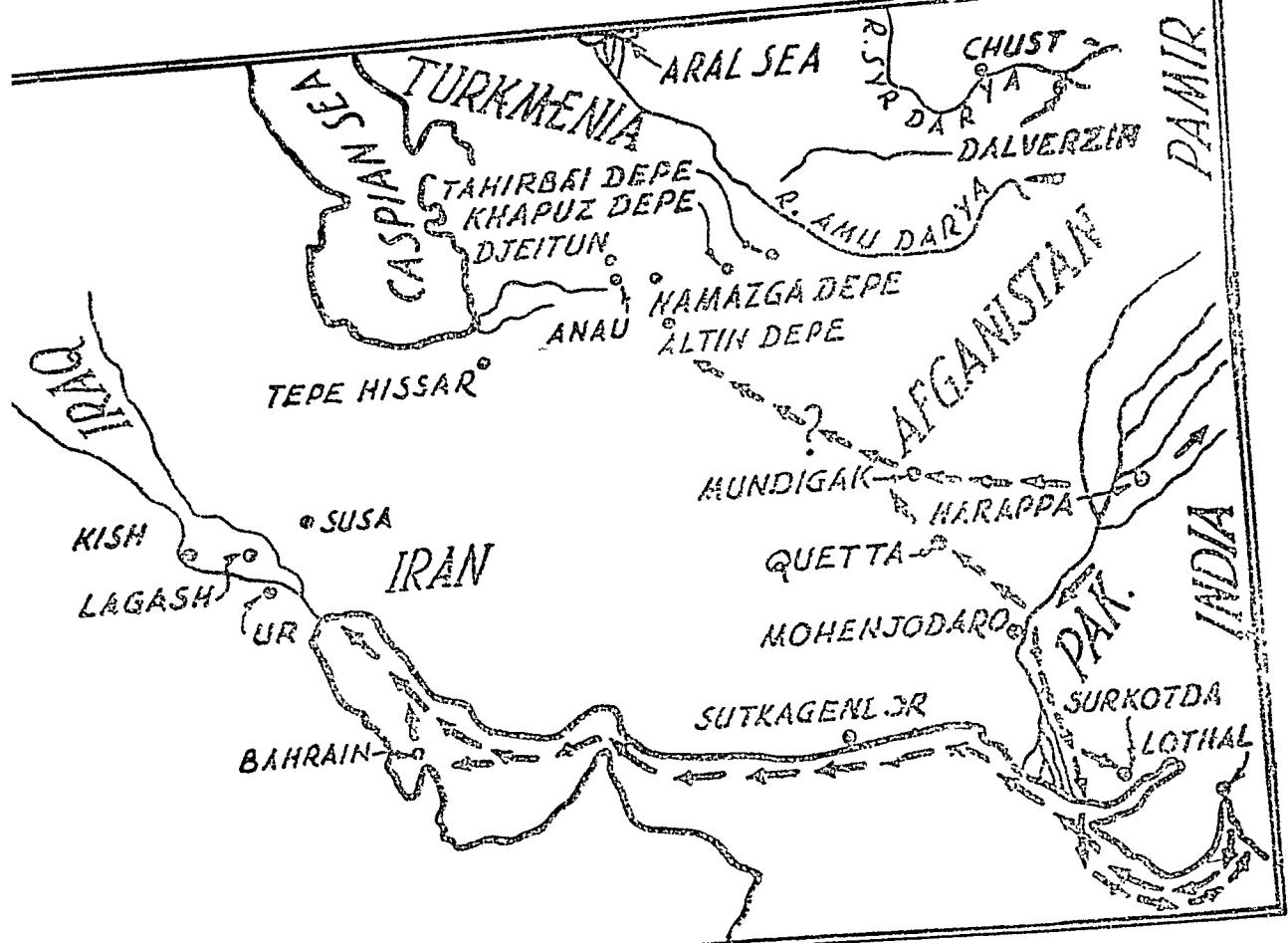


Fig. 42: Map showing Central Asian sites and their probable contacts with the Indus sites (see p. 68)

Fig. 43 : Chart showing Archaeological Correlations of different cultures (see p. 72)

Fig. 43 : Chart showing Archaeological Correlations of different Civilizations.

# NEOLITHIC PATTERN OF INDIA

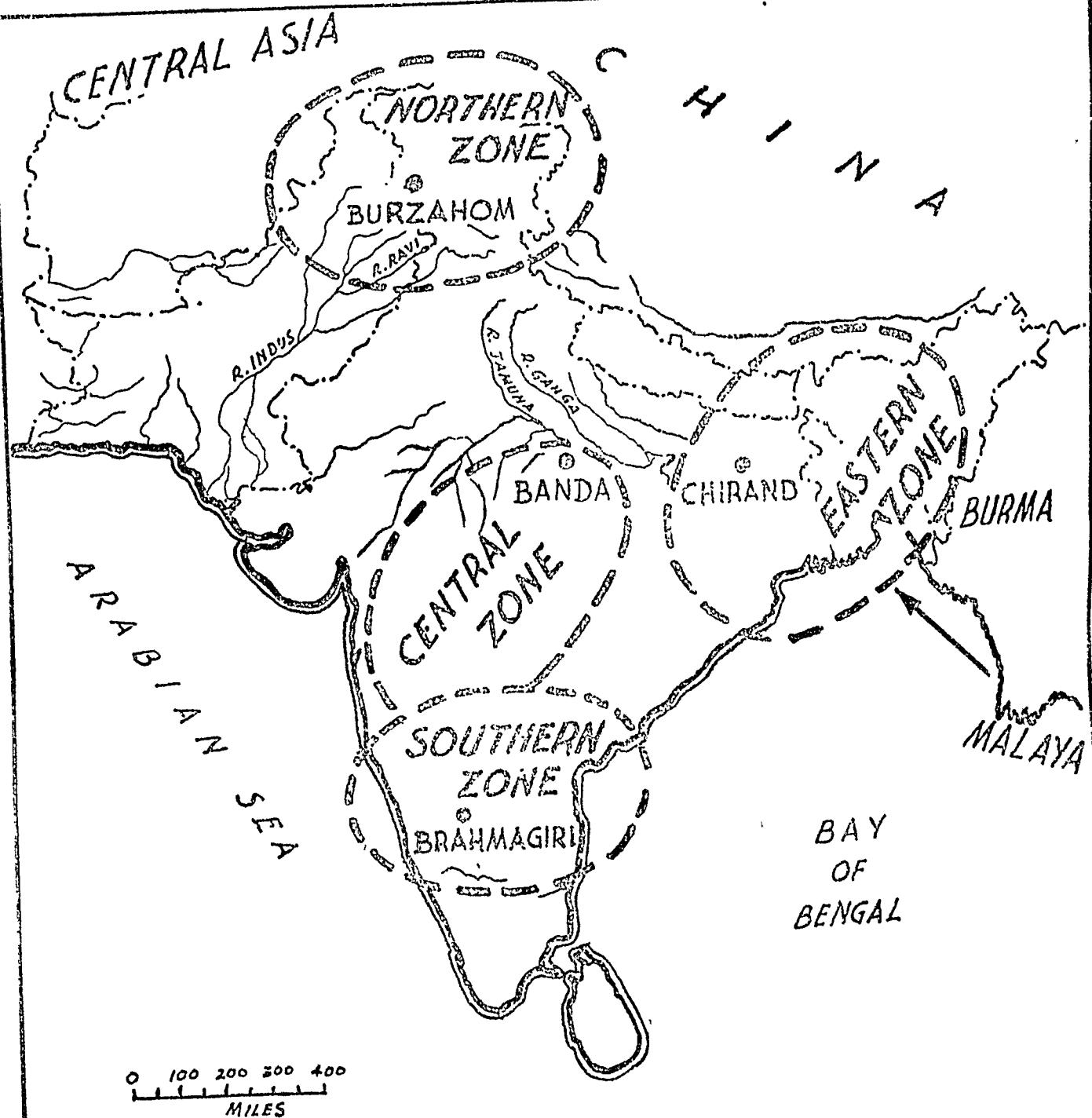


Fig. 44 : Neolithic pattern of India (see p. 72)

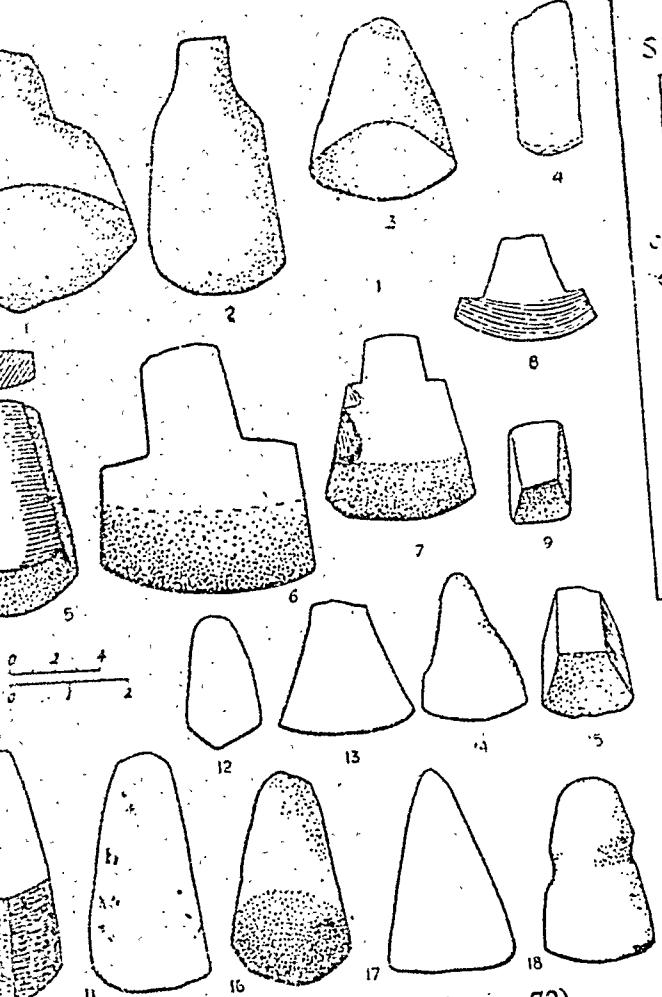


Fig. 45 : Neoliths from Assam (see p. 72)

Fig. 47 : Neoliths from Bengal, Bihar and Orissa (see p. 72)

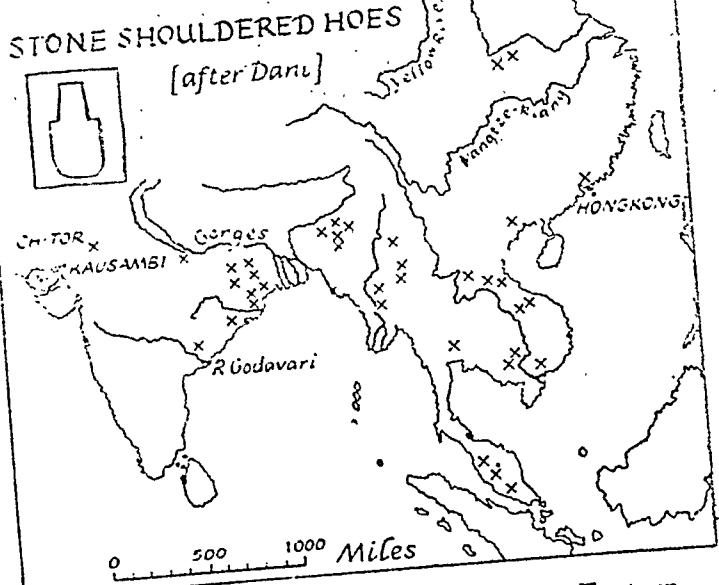
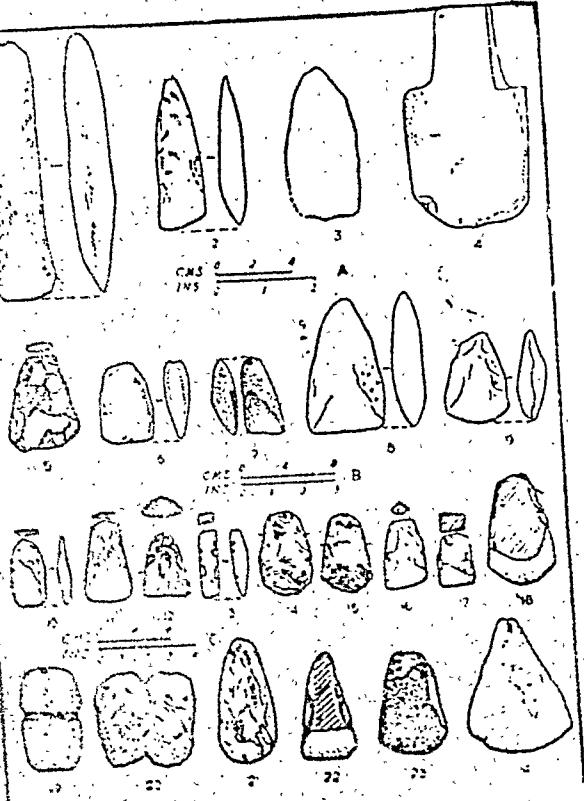
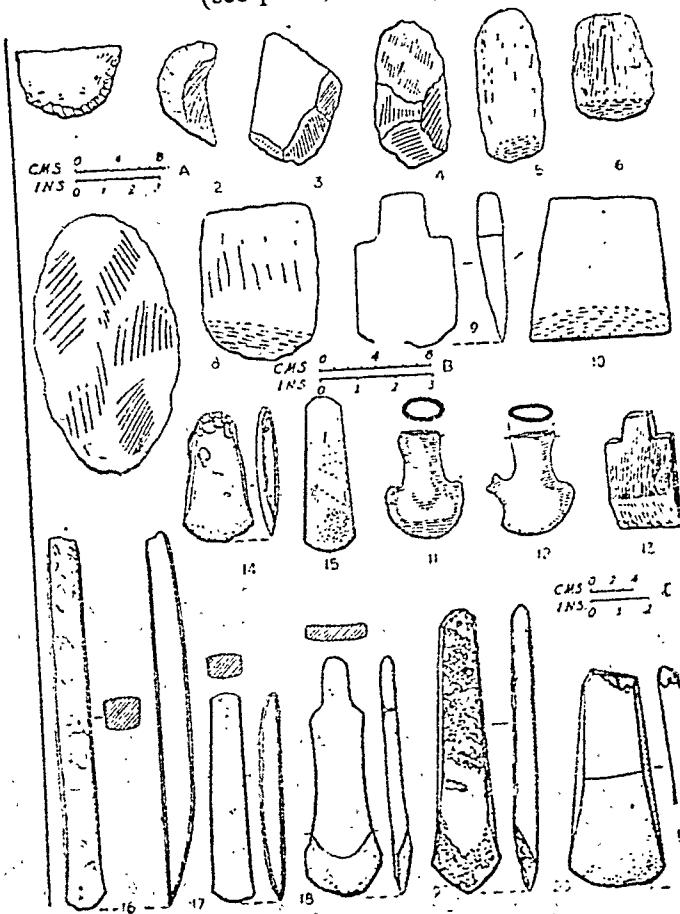


Fig. 46 : Distribution of neoliths of the Eastern Variety (shouldered hoes) found in China (see p. 72)

Fig. 48 : Neoliths from South-East Asia (see p. 72)



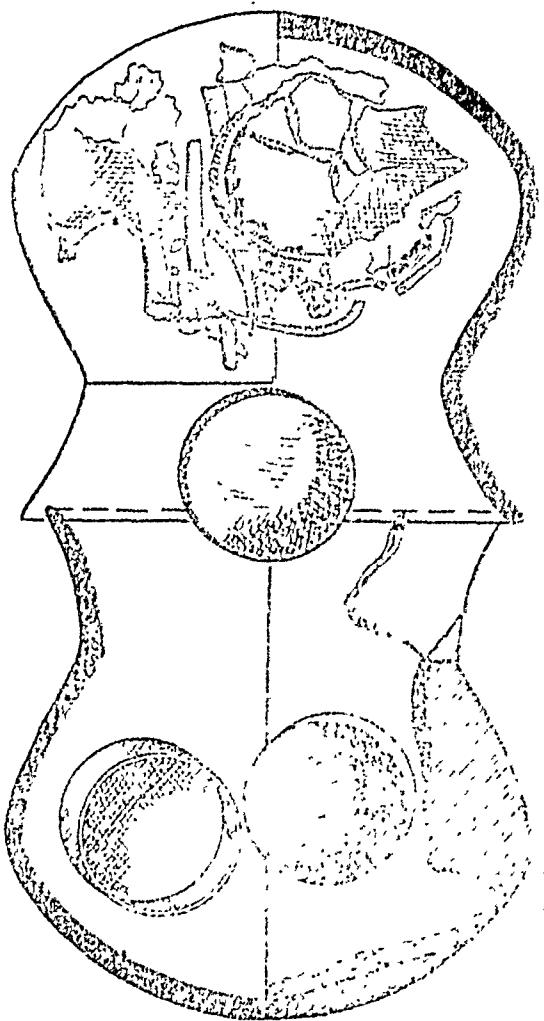
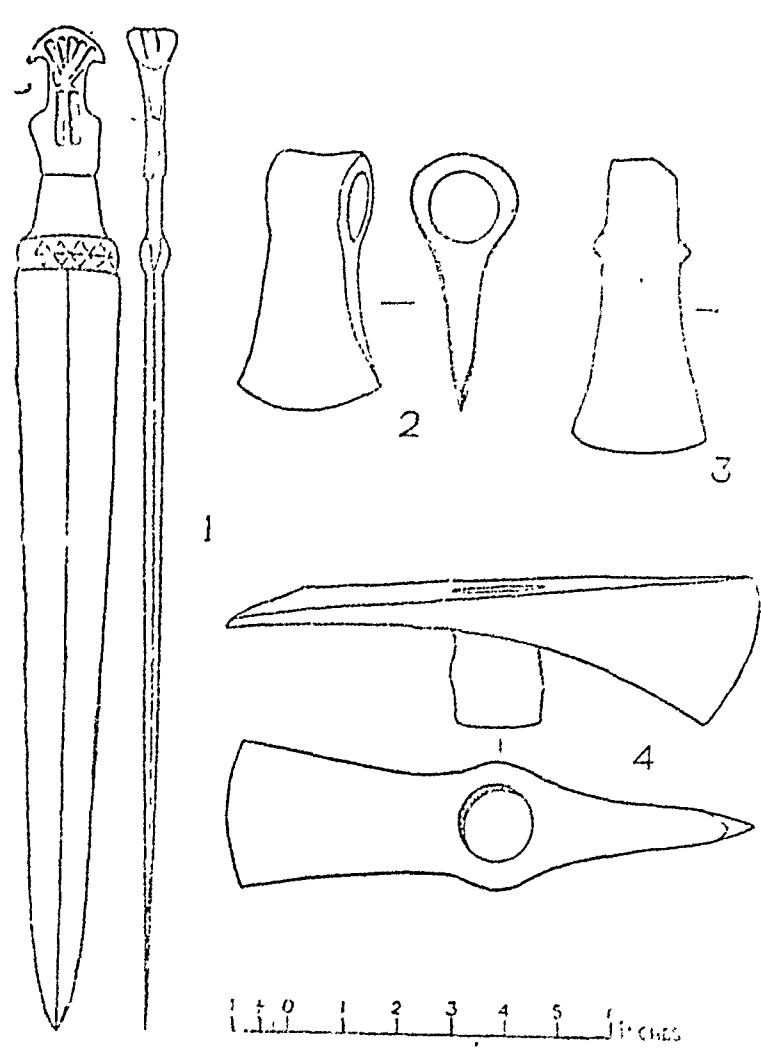


Fig. 49 : Multiple Pot Burial, Nevasa  
(see p. 78)



1. Sword from Fort Munro; 2, shaft-hole axe from Sālātānāmp. 3, mace-celt from Shalazān. 4, shaft-hole mace-axe from Mādārāndām.

Fig. 50 : Head-rests from Hallur (see p. 78)

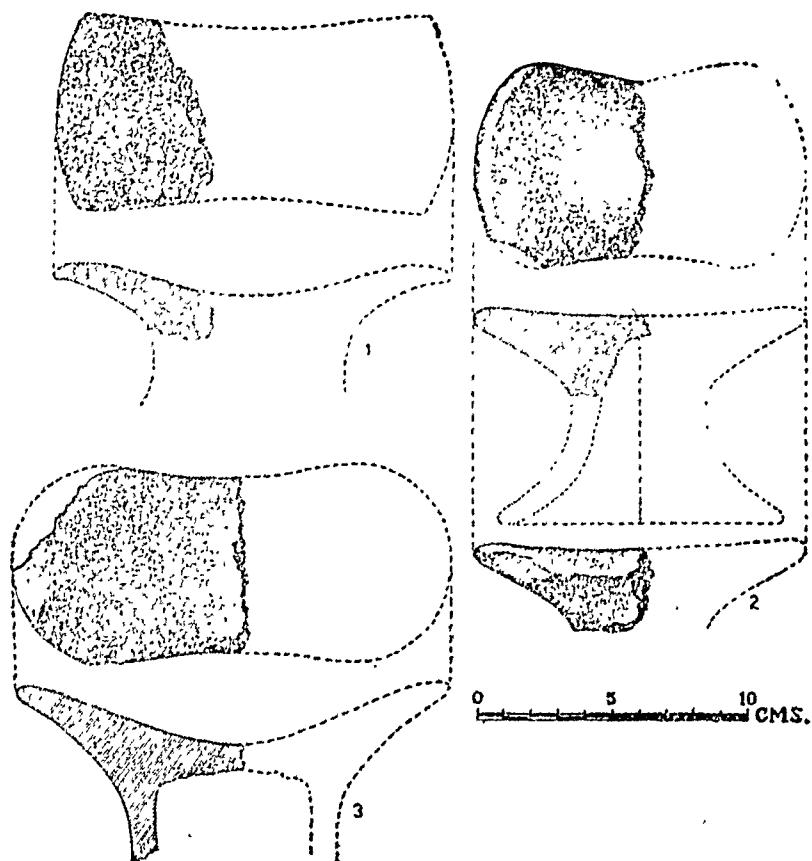


Fig. 51 : Bronze objects supposed to have been associated with Indian Copper Hoards  
(see p. 81, 135)

Fig. 52 : A socketed celt from Kurukṣetra  
(see p. 81)

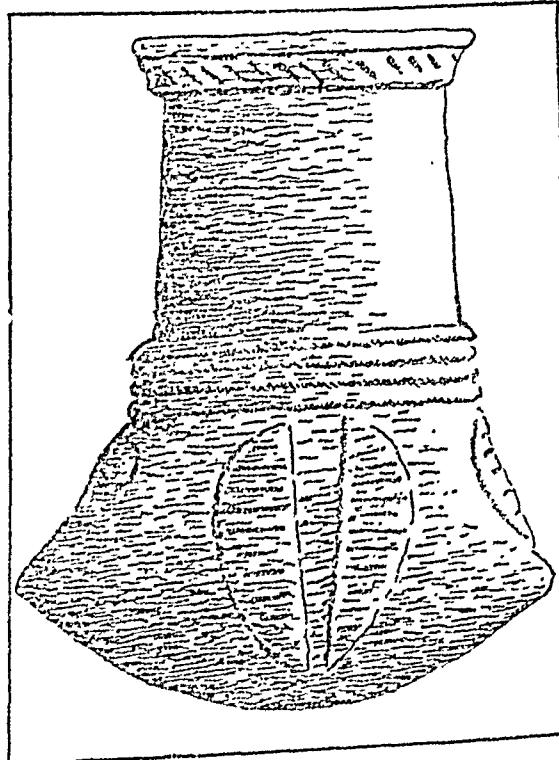




Fig. 53 : Objects of Banas Culture found at Ahar  
(see p. 82)

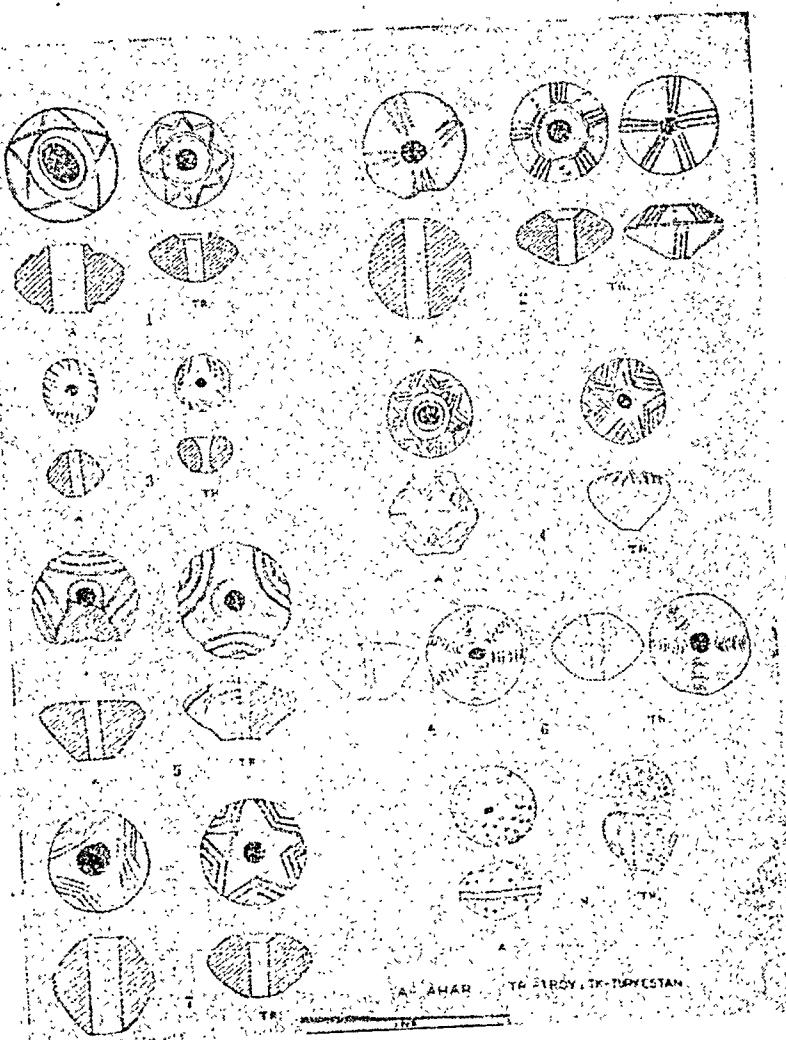


Fig. 54 : Incised terracotta spindle-whorls  
from Ahar and Troy  
(see p. 82)

# CHALCOLITHIC AND NEOLITHIC SITES OF INDIA

◊ CHALCOLITHIC SITES  
 △ NEOLITHIC SITES (POLISHED AXES)  
 - - - ANCIENT TRADE  
 ROUTE  
 27 11 111  
 MILES

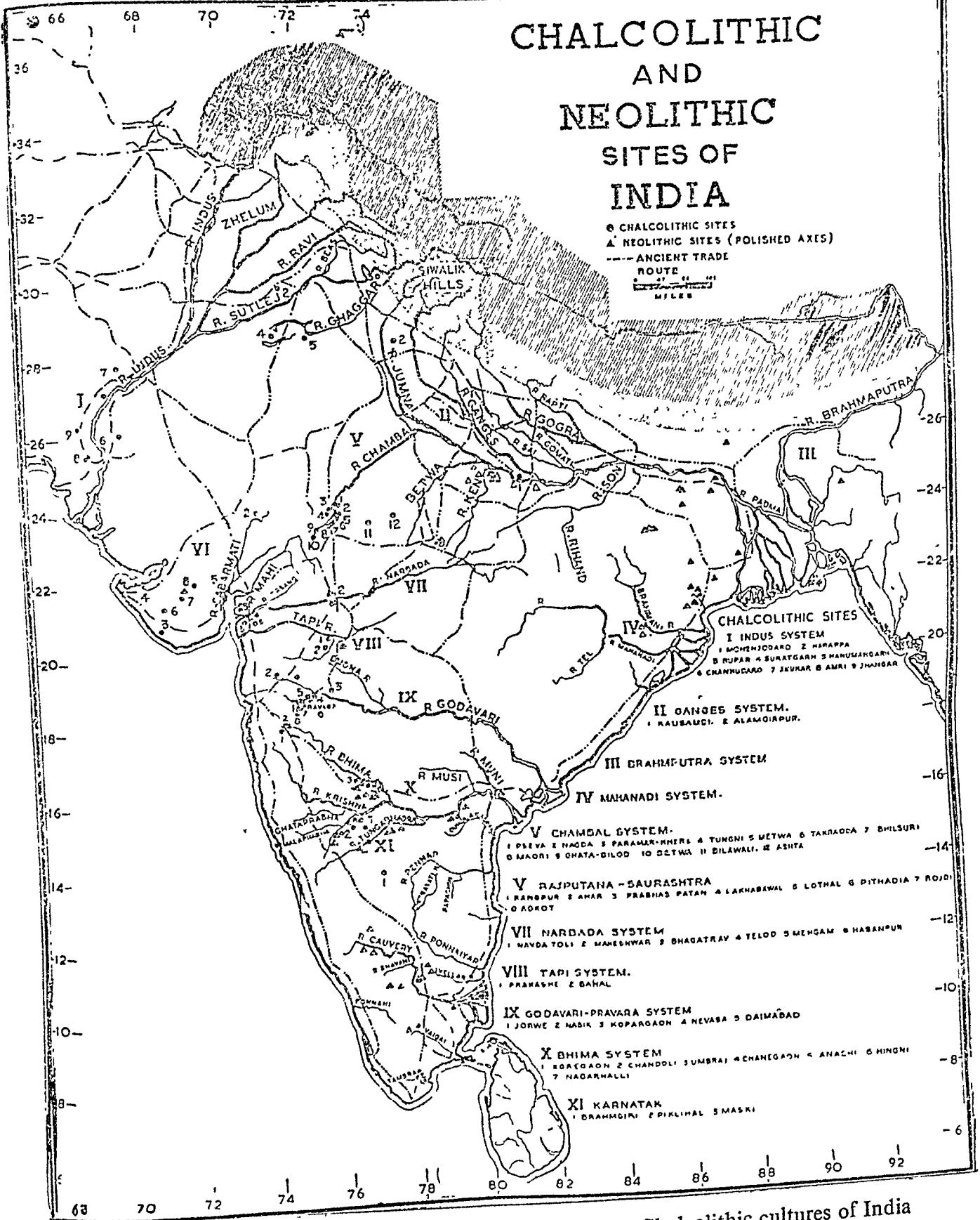


Fig. 55 : Map showing the sites of Neolithic and Chalcolithic cultures of India

# CHALCOLITHIC PATTERN OF INDIA

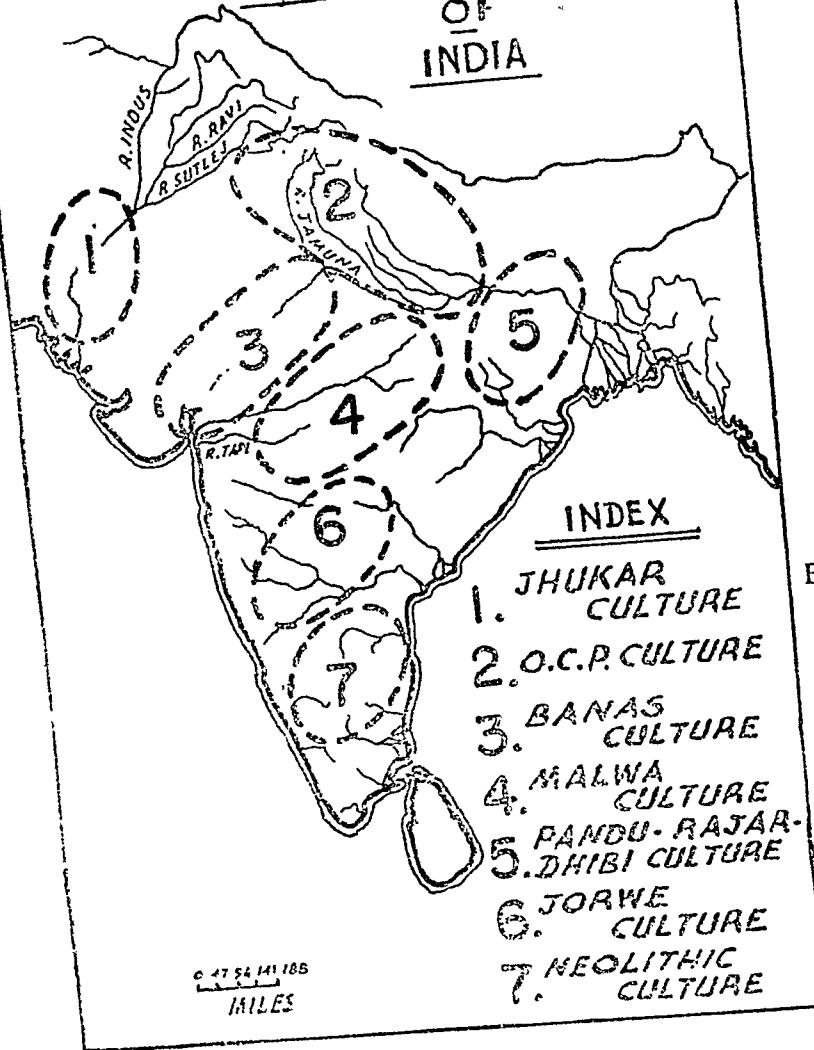


Fig. 56 : Map showing the Chalcolithic Pattern of India (see pp. 83, 88)

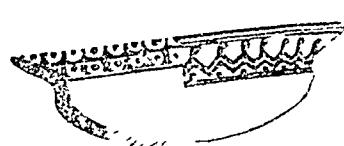


Fig. 57 : Stemmed bowls from Navdatoli (see p. 84)

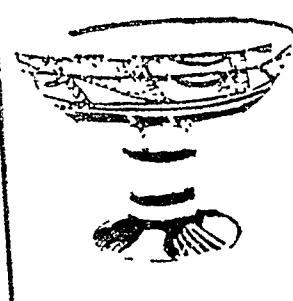
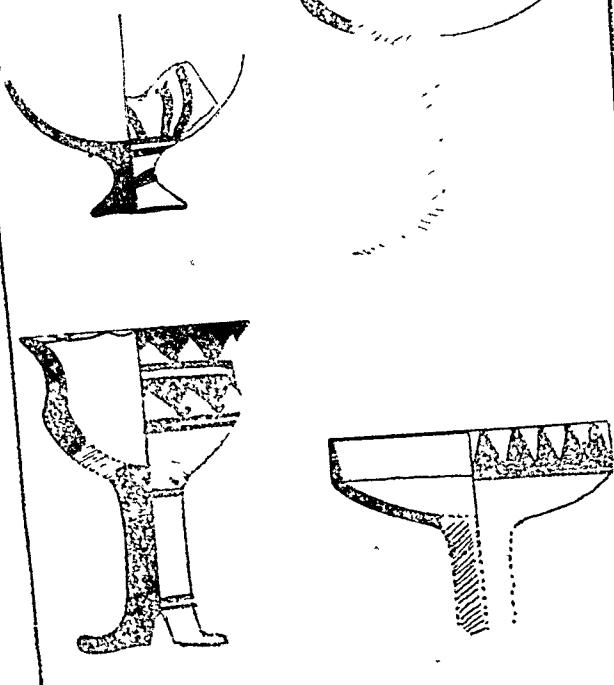


Fig. 58 : Painted Chalcolithic vessel from Tepe (see pp. 84, 85)

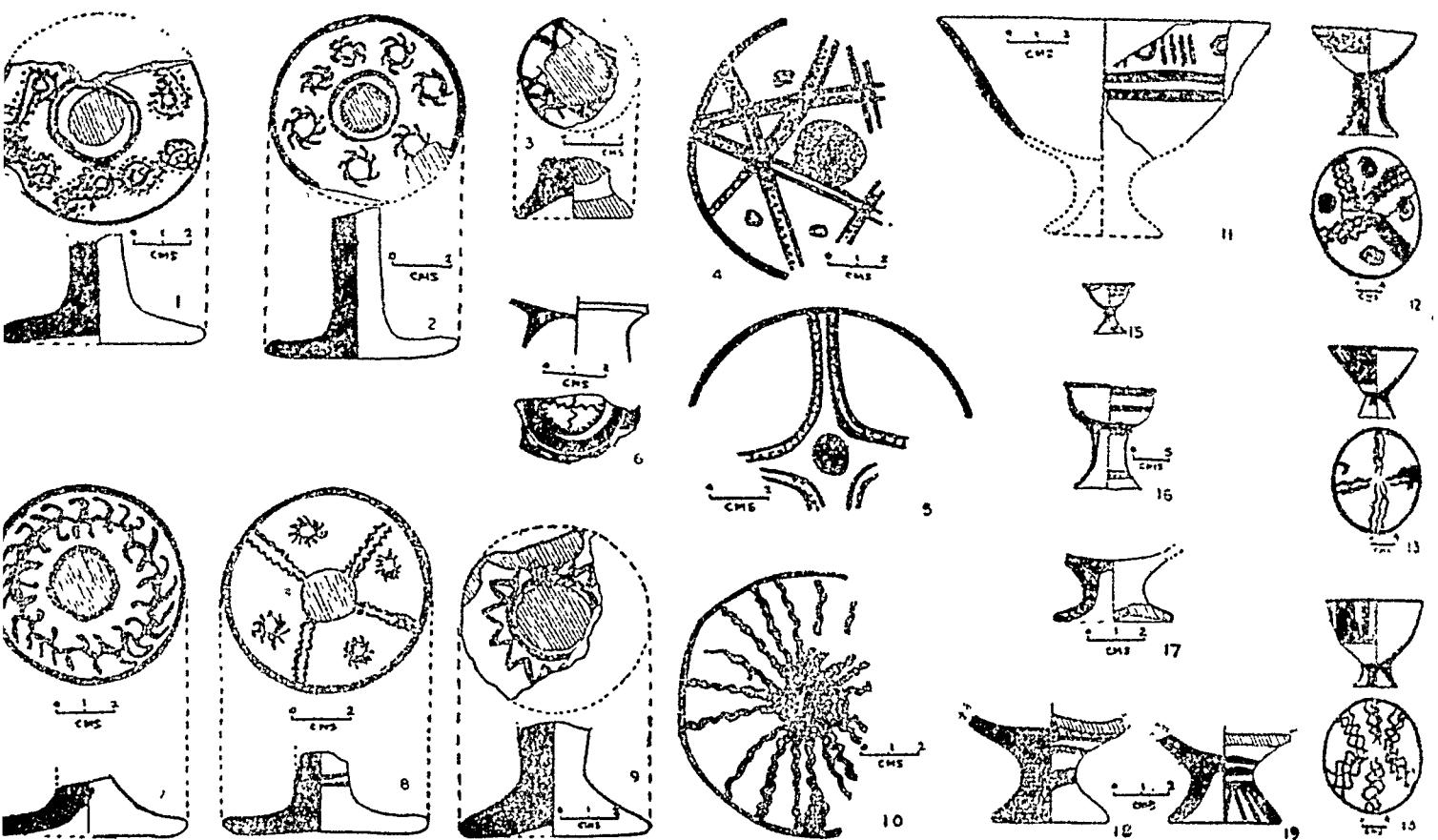


Fig. 59 : Painting of Wavy lines on the base of the footed cups or goblets 1-10:  
Navdatoli and Amri: 11-19 Iran (see p. 84)

Fig. 60 : Elongated animal forms as designs on pottery 1-4, Iran: 5-7, India  
(see pp. 85, 89)

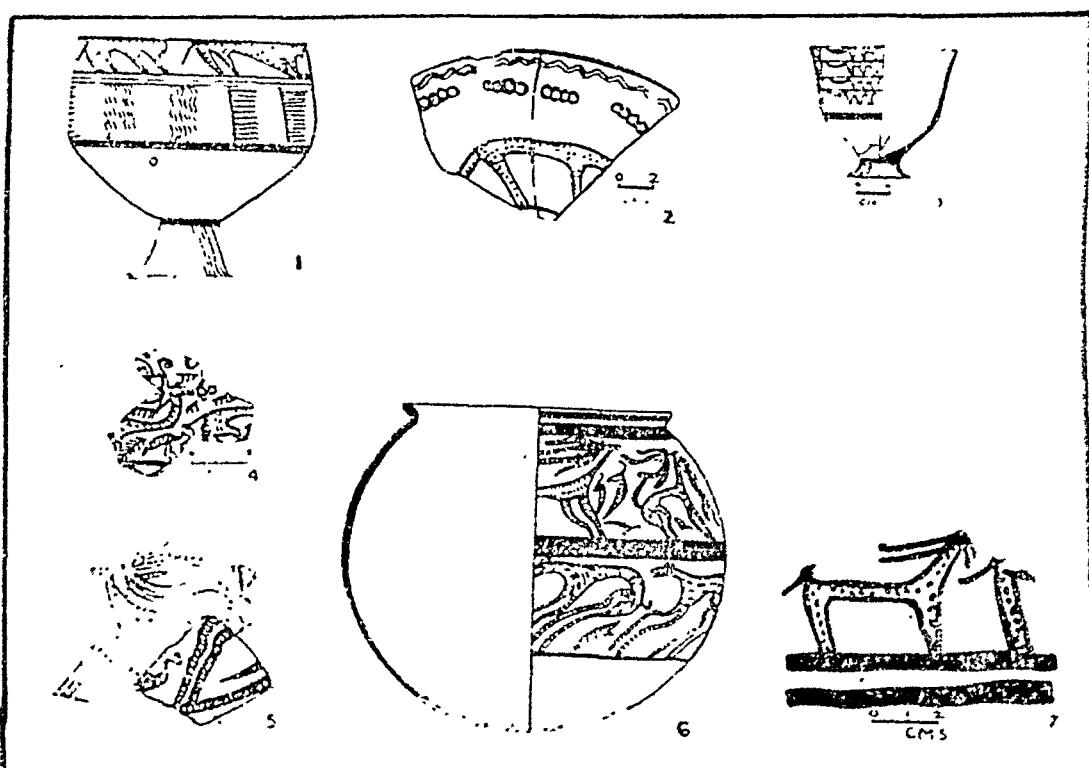




Fig. 61 : Painted human figures on Chalcolithic  
Potteries from India and West Asia-1-2  
Nagda; 3-9 Navdatoli; 10 Turkey, 11-13  
Sialk 14-Tell Halaf, 15 Rana Ghundai,  
16 Cheshmeh Ali near Tehran  
(see pp. 85, 86)

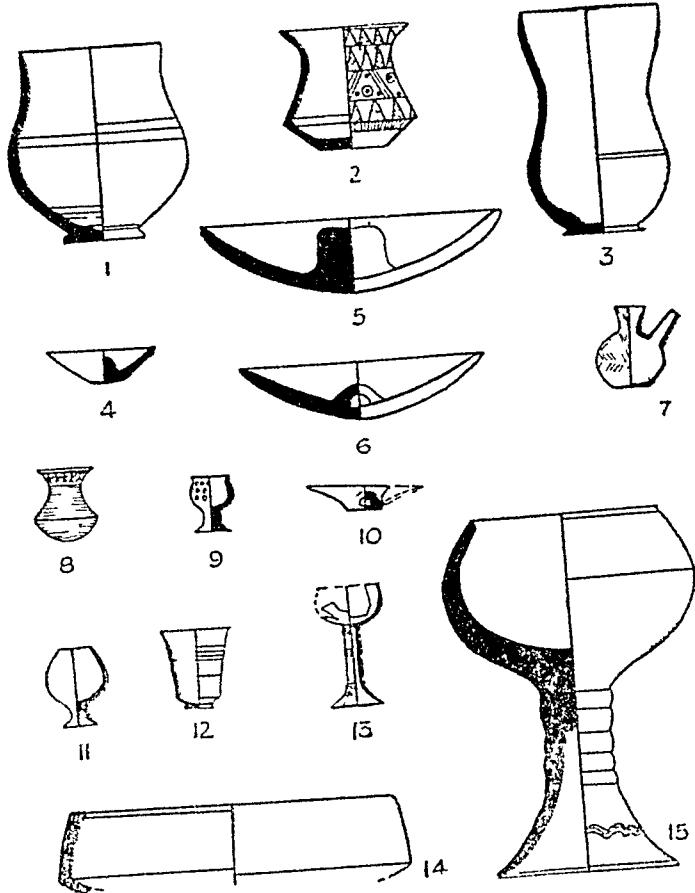


Fig. 62 : Pottery from Gandhara Grave Culture  
(8 from Navdatoli shown for  
comparison)  
(see pp 87, 94, 134)

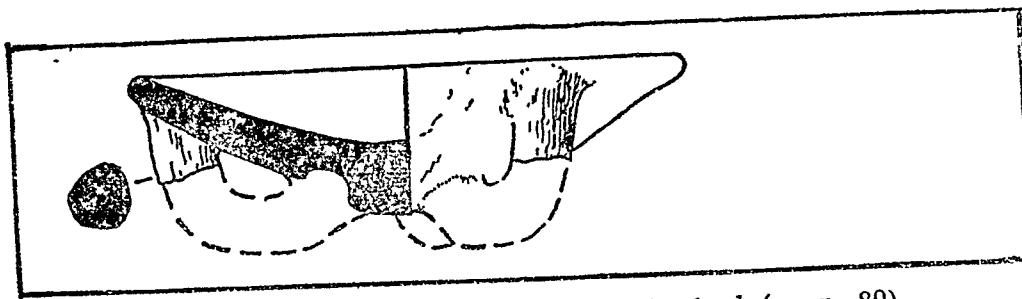


Fig. 63 : Dish with looped-feet from Prakash (see p. 89)

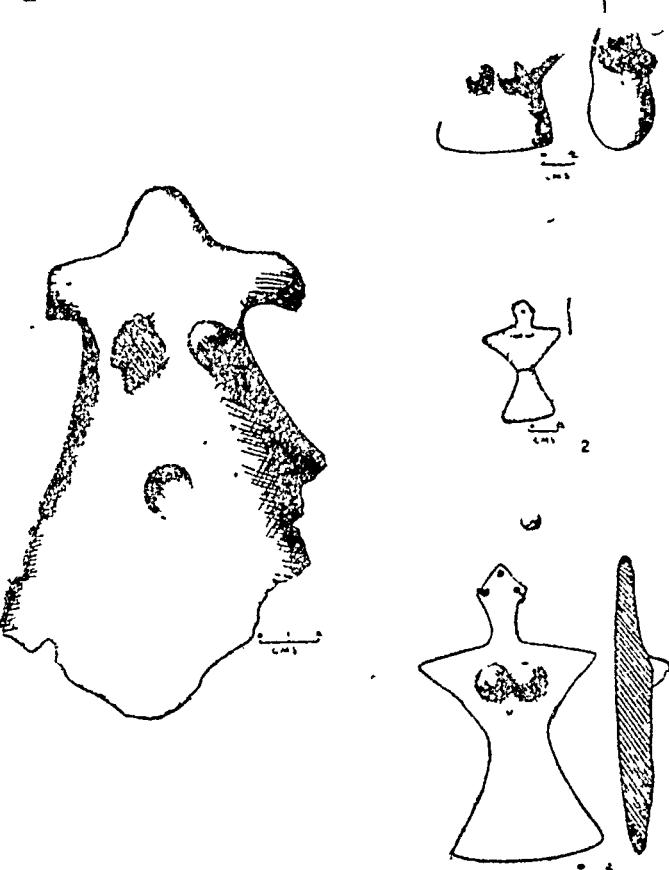


Fig. 64 : Mother goddess from Hissar (1-3)  
and Nevasa (4)  
(see p. 90)

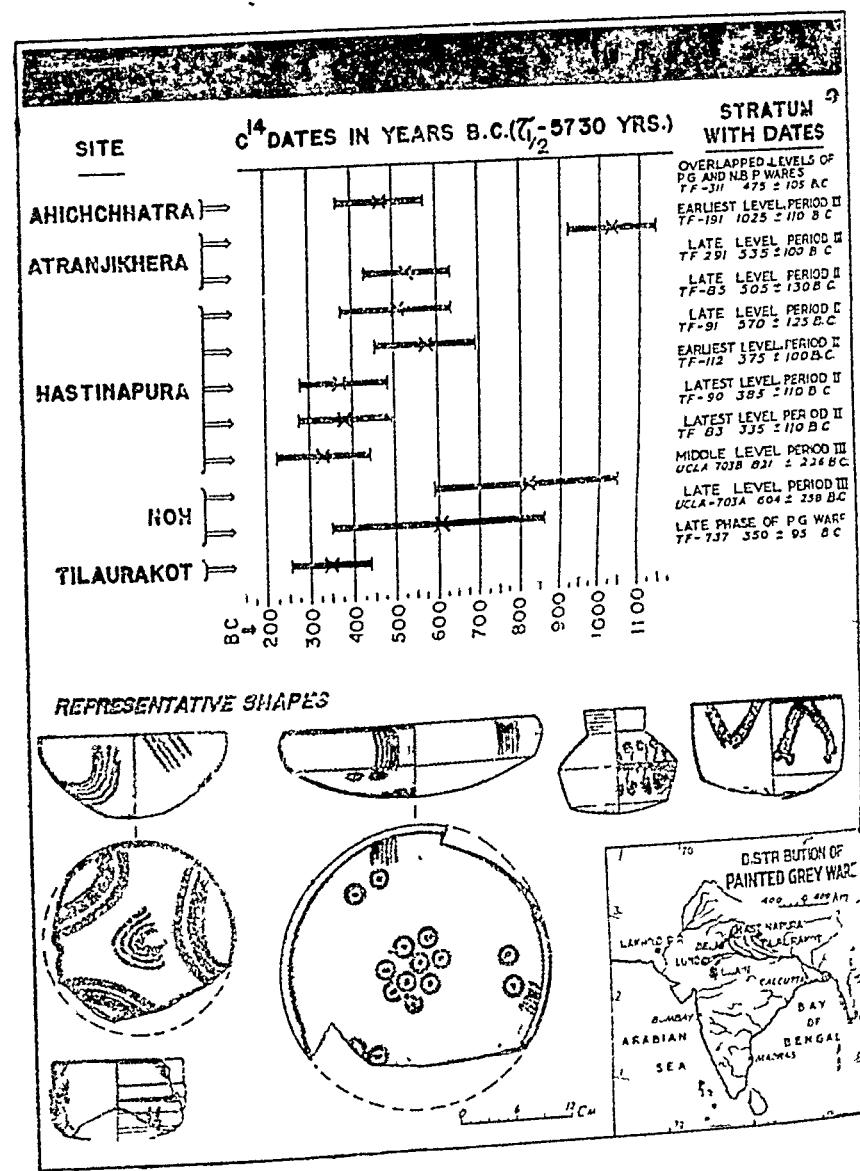


Fig. 65 : Chart showing the painted  
Grey Ware shapes and some  
 $C-14$  dates  
(see p. 92)

**INDIA'S CONTRIBUTION TO WORLD THOUGHT AND CULTURE**

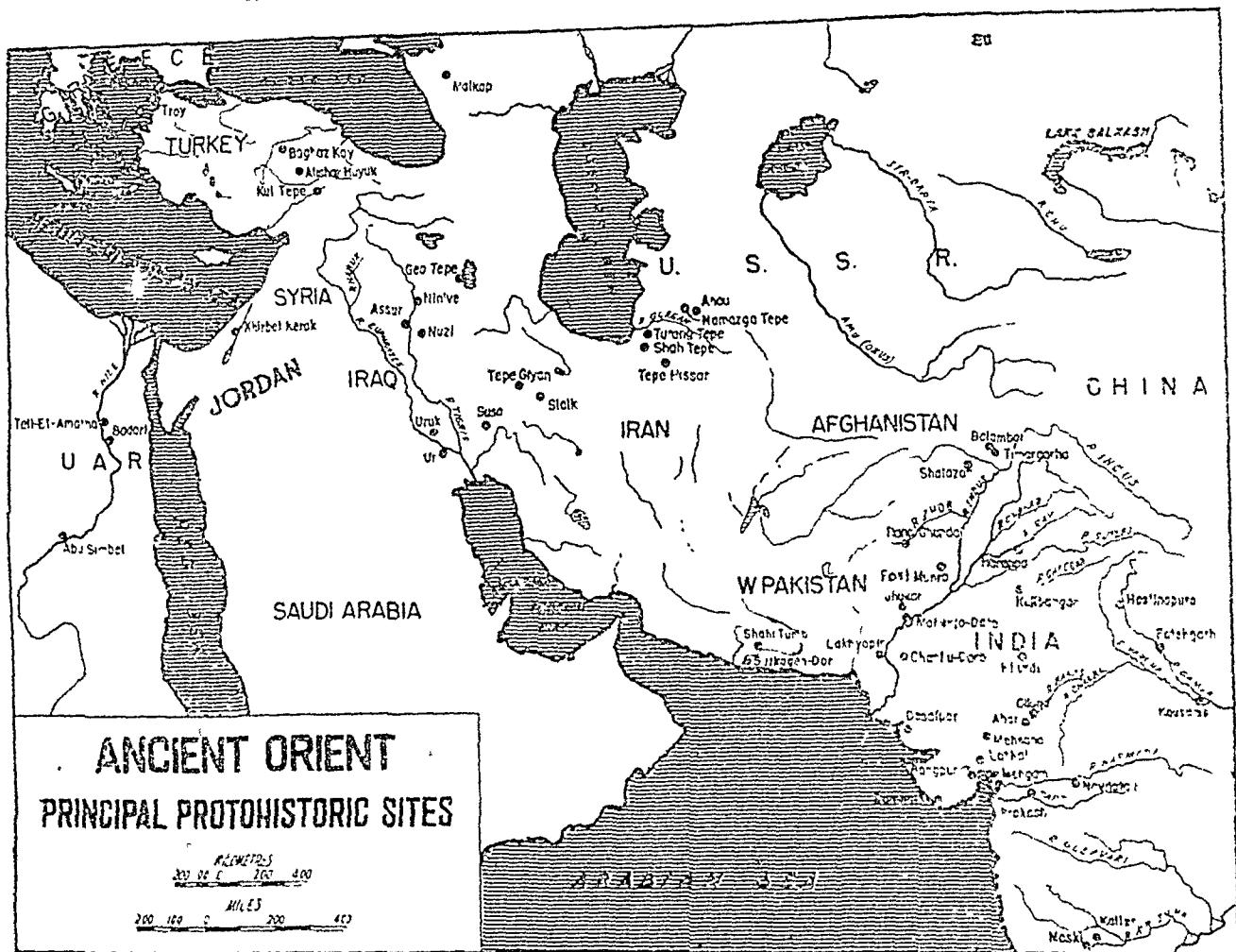
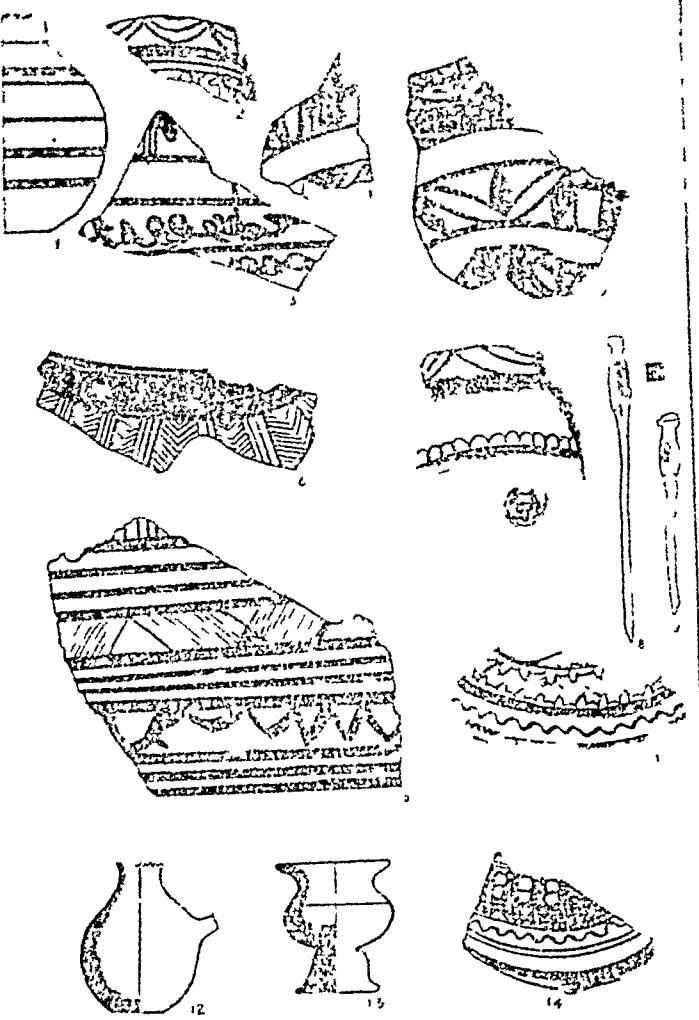


Fig. 66 : Map showing the Ancient Orient and Principal protohistoric sites (see p. 93)



g. 68 : Painted Panels of Mythological Scenes depicted on burial jars from 'Cemetery H' (see p. 103)

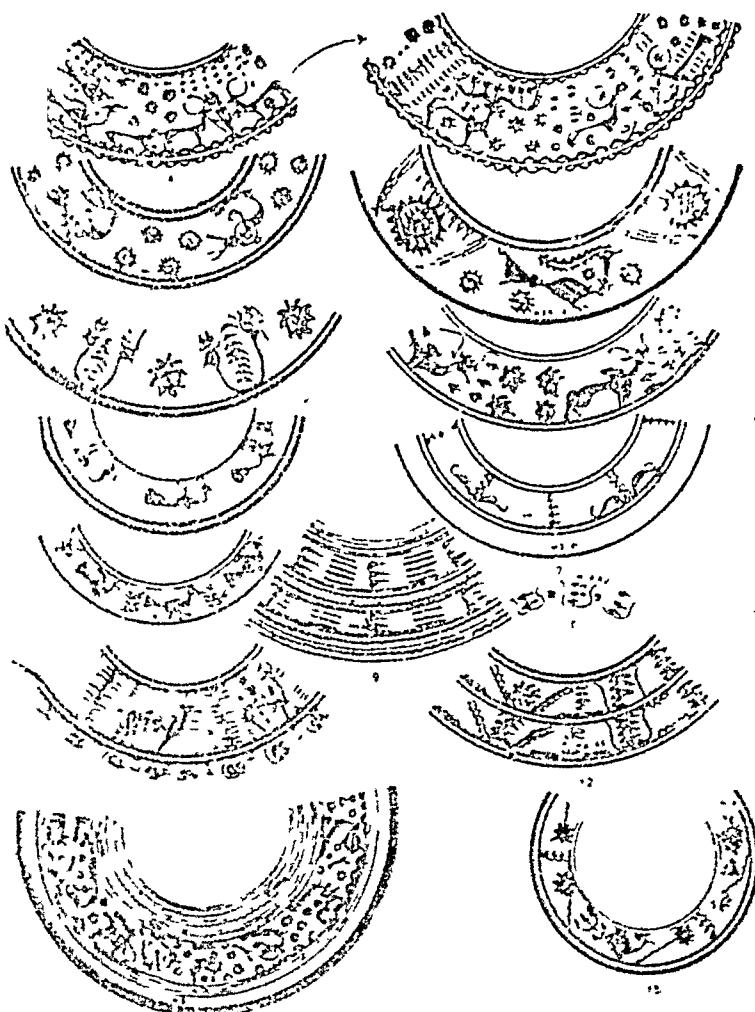
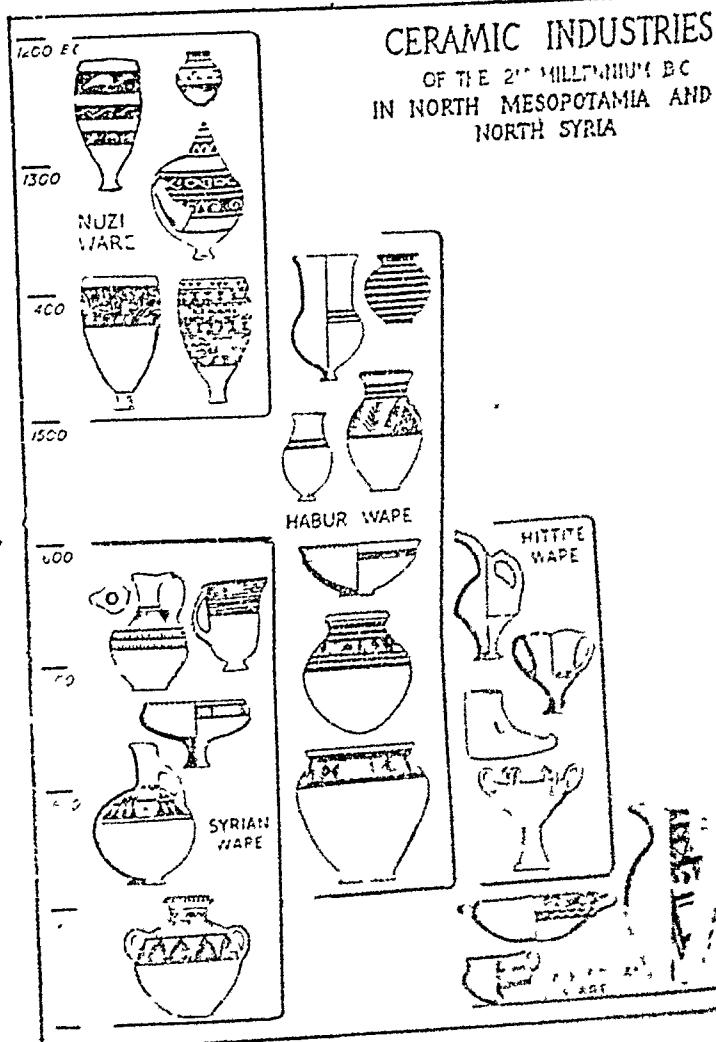


Fig. 67 : Painted Pottery and Pins from Jhukar culture (see pp. 95-100)

1. Red bands
2. Species of goat
3. Crescent-shaped motif
4. Chequer pattern
5. Triangles Concave sides
6. Chevron pattern
7. Ball and stem motif
- 8-9. Copper Pins
10. Zig-Zag pattern
- 11-Criss cross band
12. Spouted vessel
13. Cup
14. Figure of 8 motif

Fig. 69 : Ceramic industries of the 2nd Millennium B.C. in North Mesopotamia and North Syria (see p. 134)



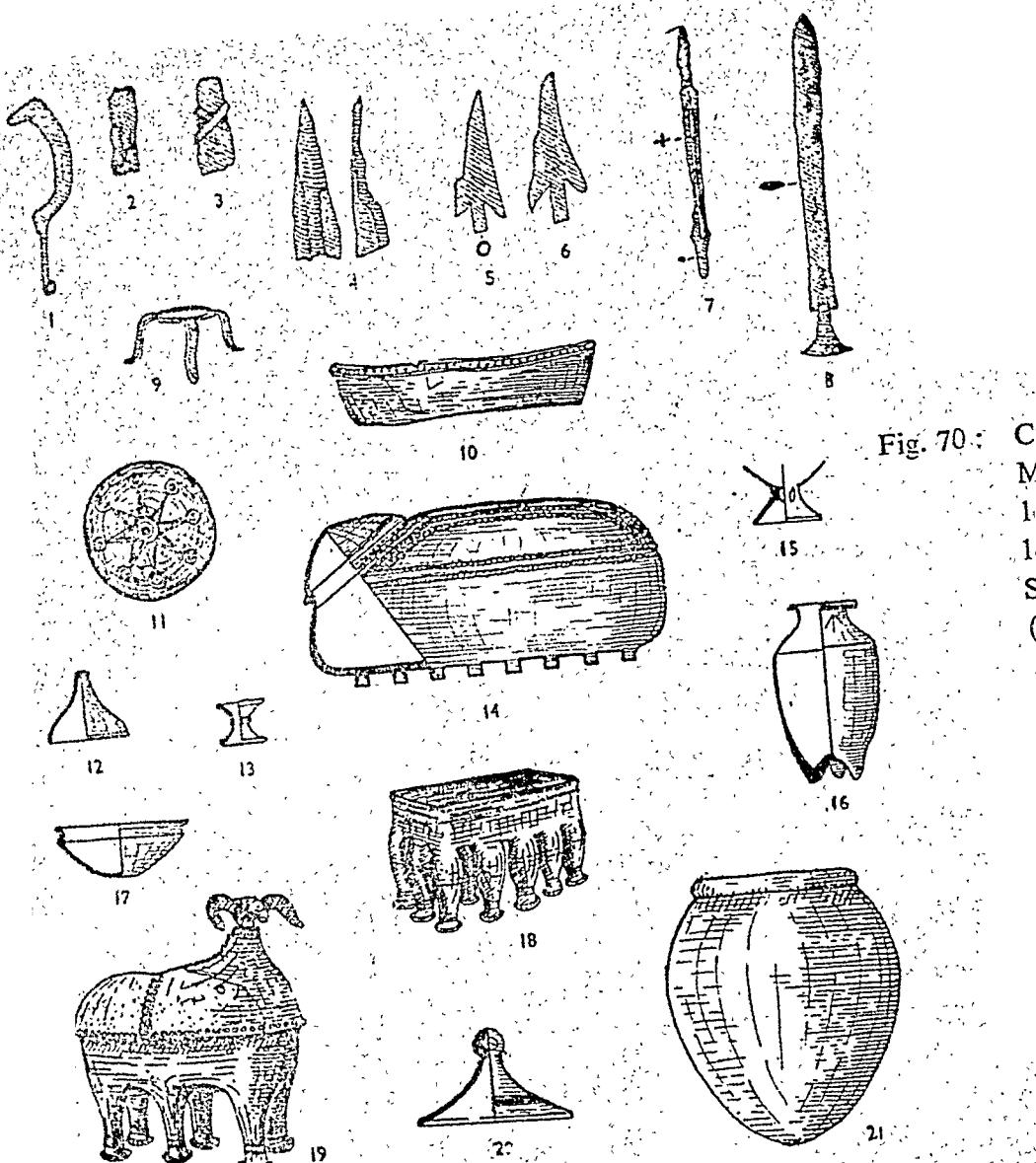


Fig. 70 : Cultural Equipment of Indian Megaliths  
 1-9-Iron objects;  
 11- shell-object. Rest-pottery.  
 14,18,19- different type of Sarcophagi; 21- urnbarial (see p. 105)

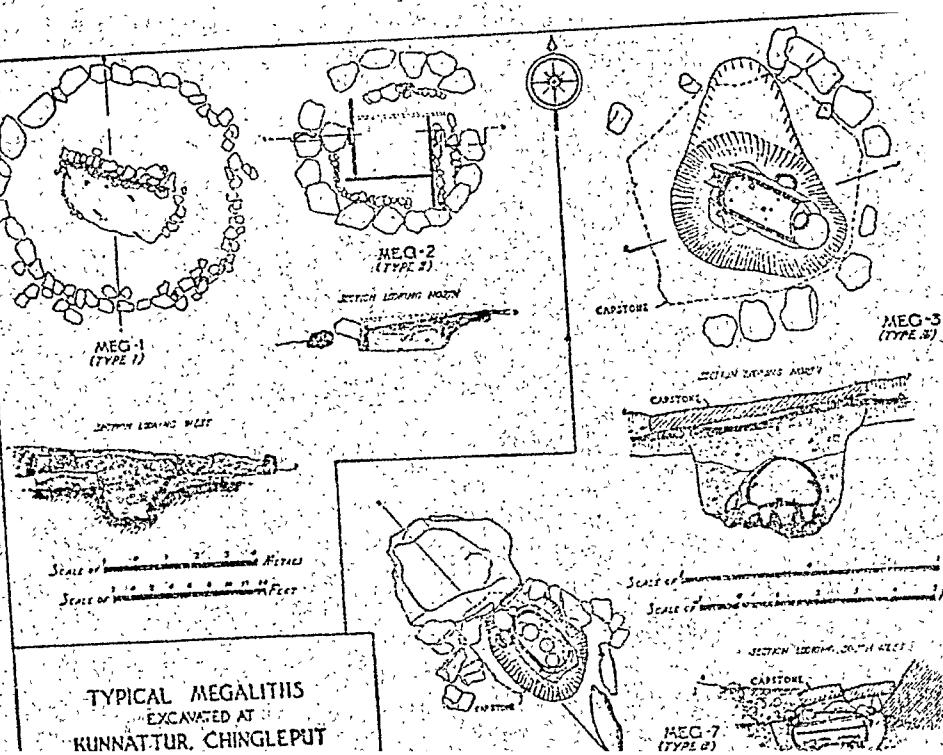


Fig. 71 : Some Megalithic types in India (see p. 108)

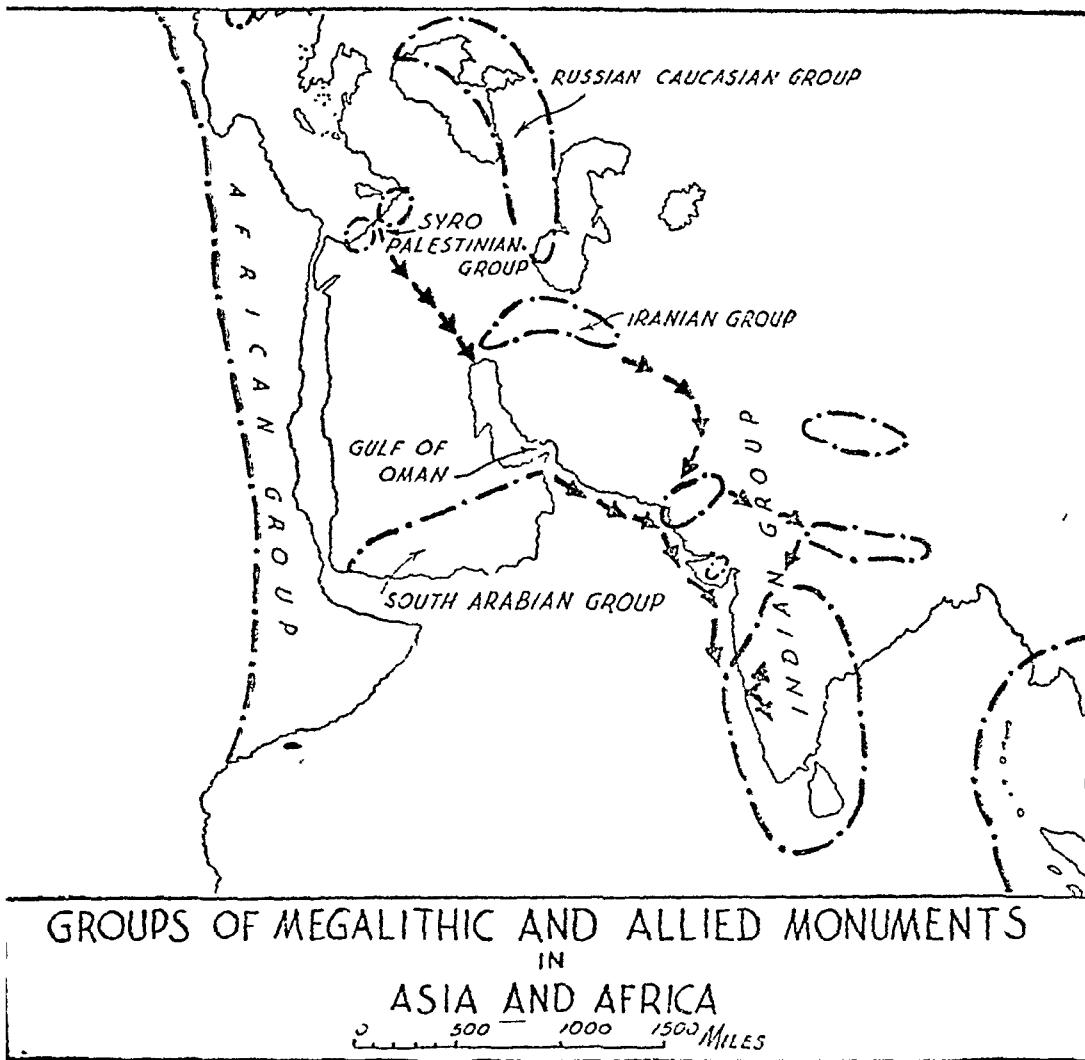


Fig. 72 : (see p. 111,112)

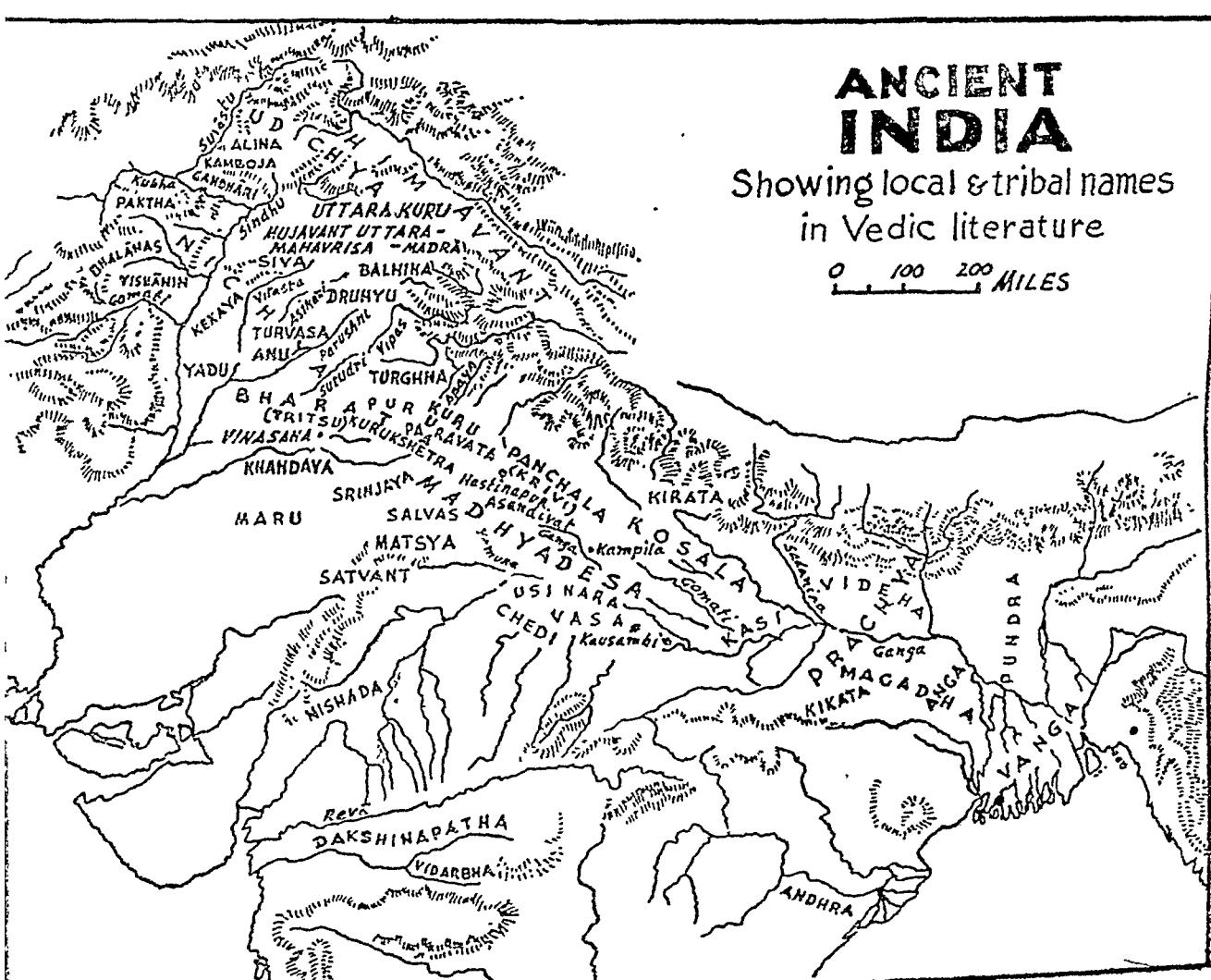


Fig. 73 :  
(see p. 120)

INDIA  
IN THE  
RĀMĀYANA AGE

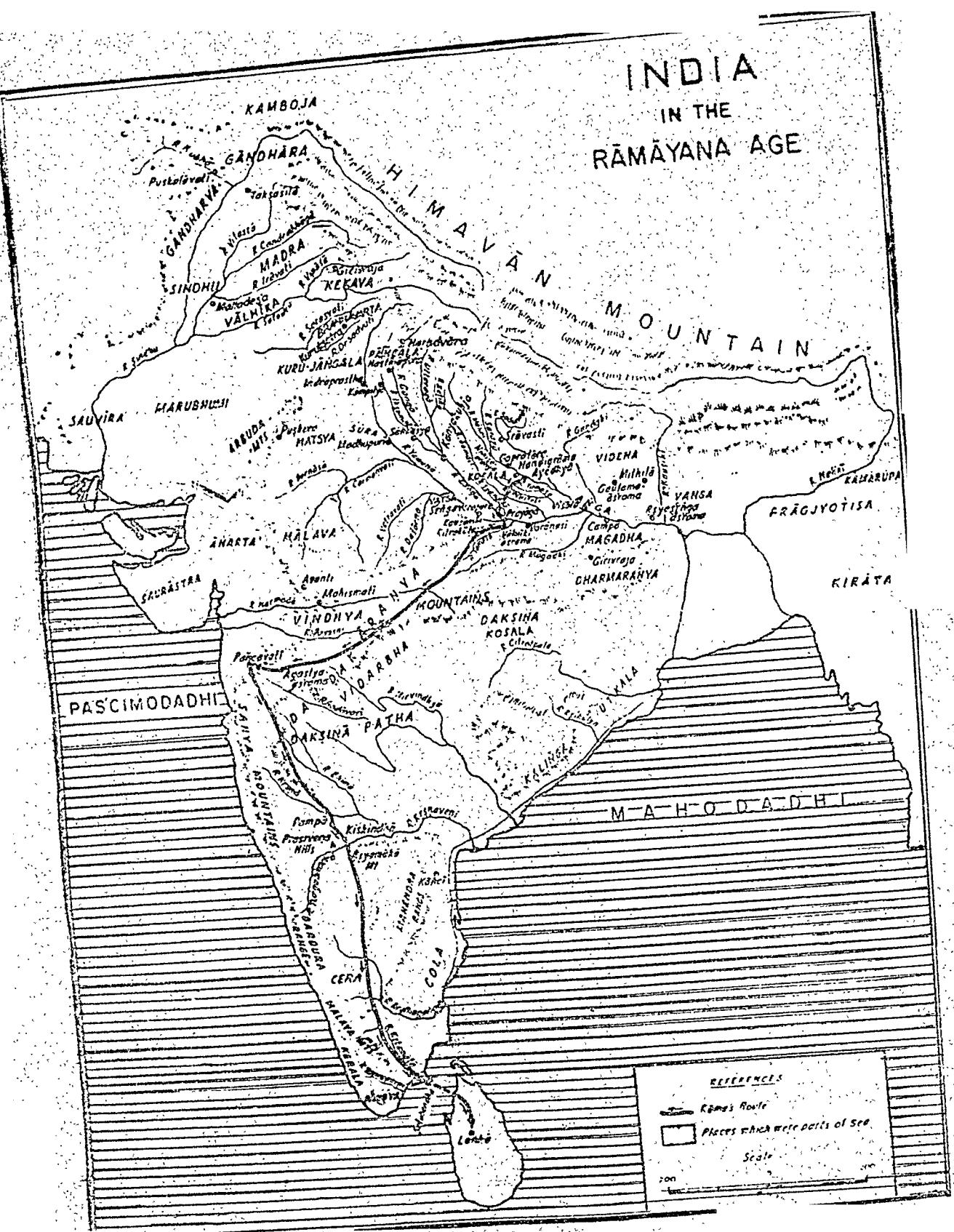


Fig. 74 (a) : (see p. 139)

## MAP SHOWING POSITION OF 'ORIGINAL' LANĀKĀ

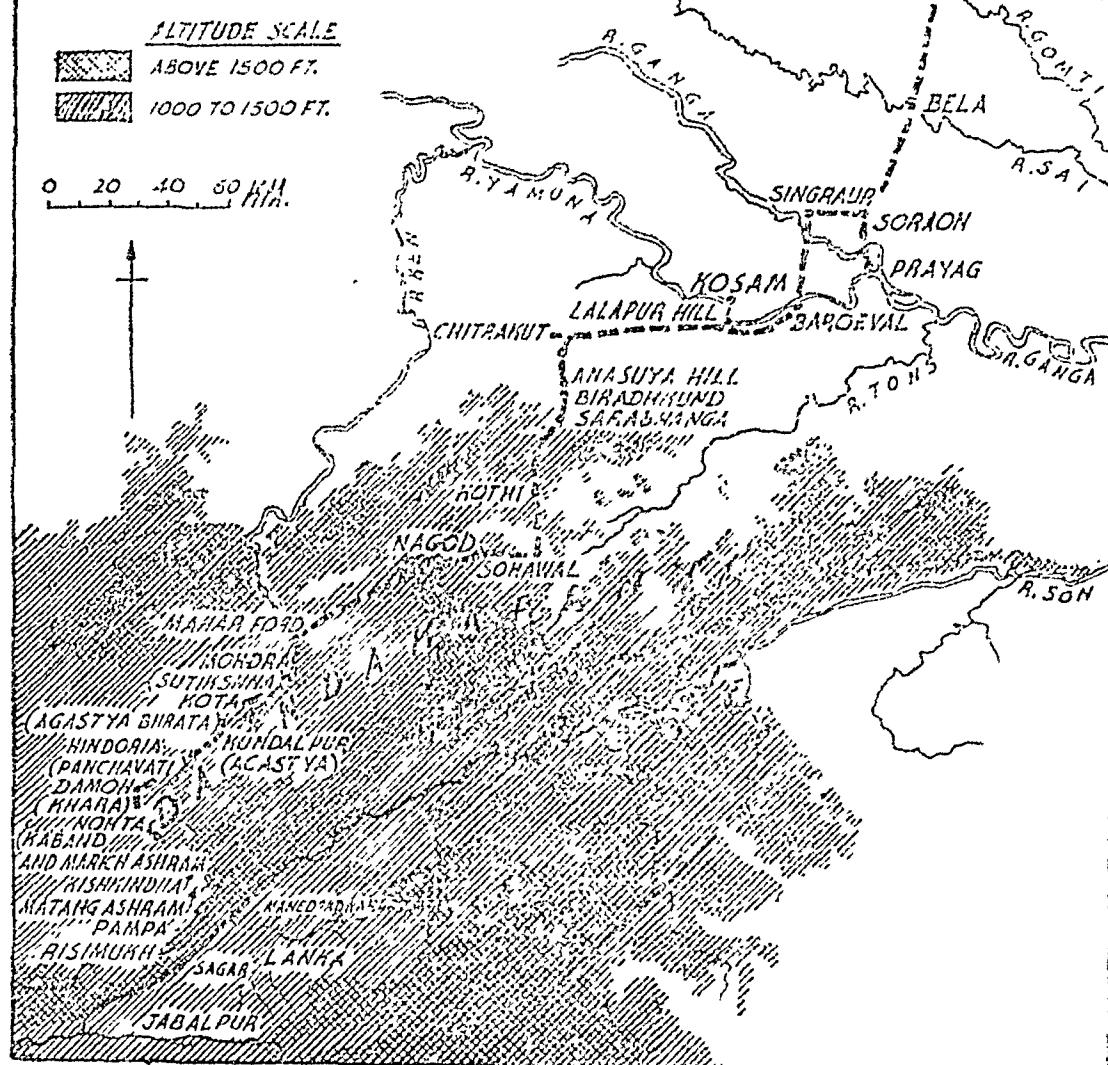


Fig. 74 (b) : (see p. 141)

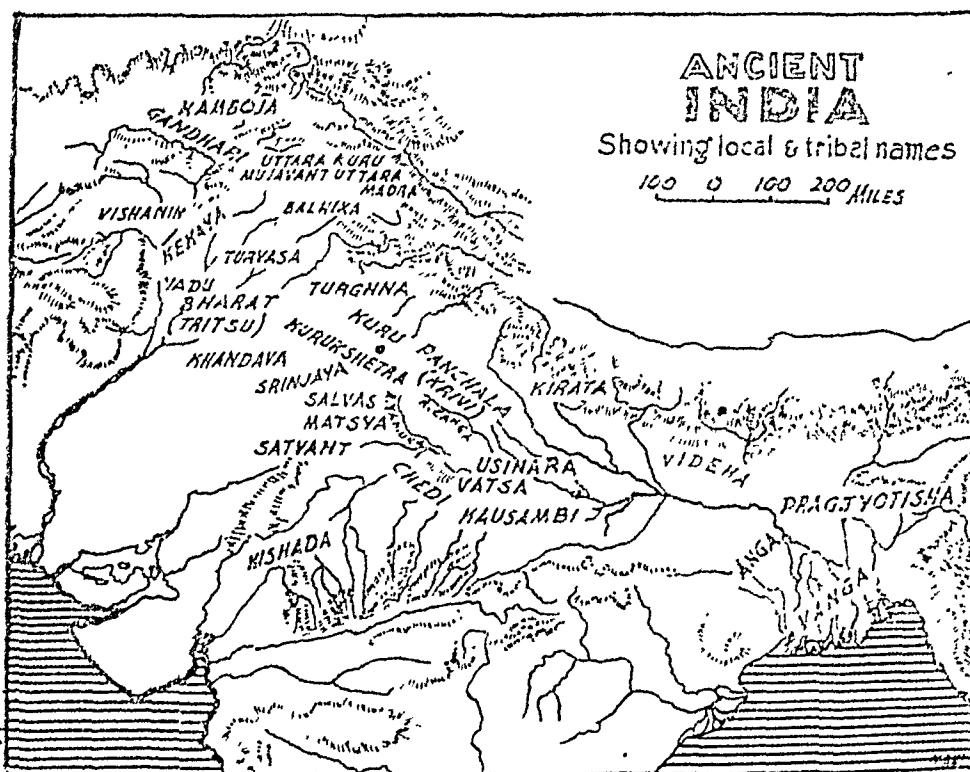


Fig. 75 : Northern India of the  
Mahabharat Period  
(see p. 151)

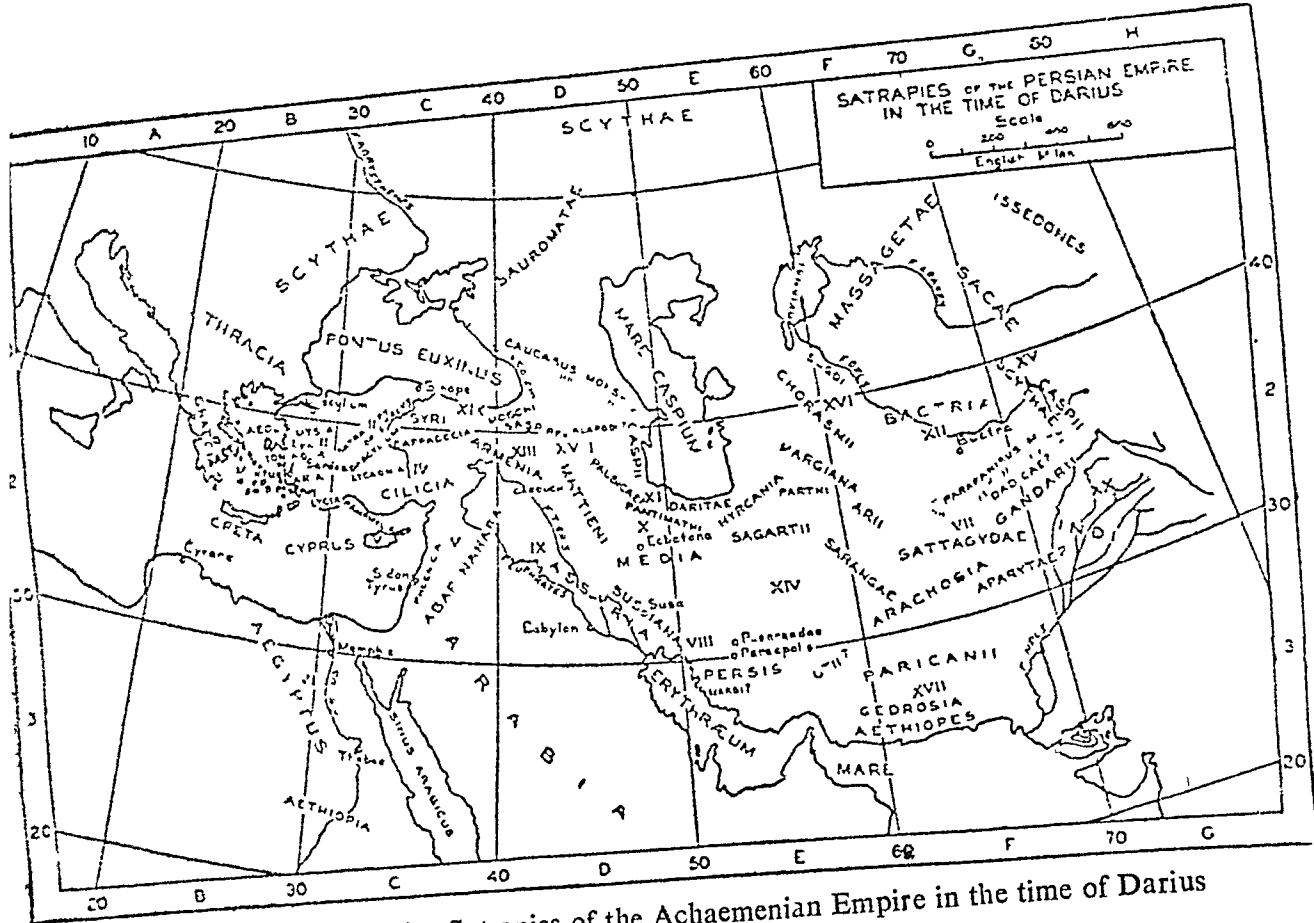
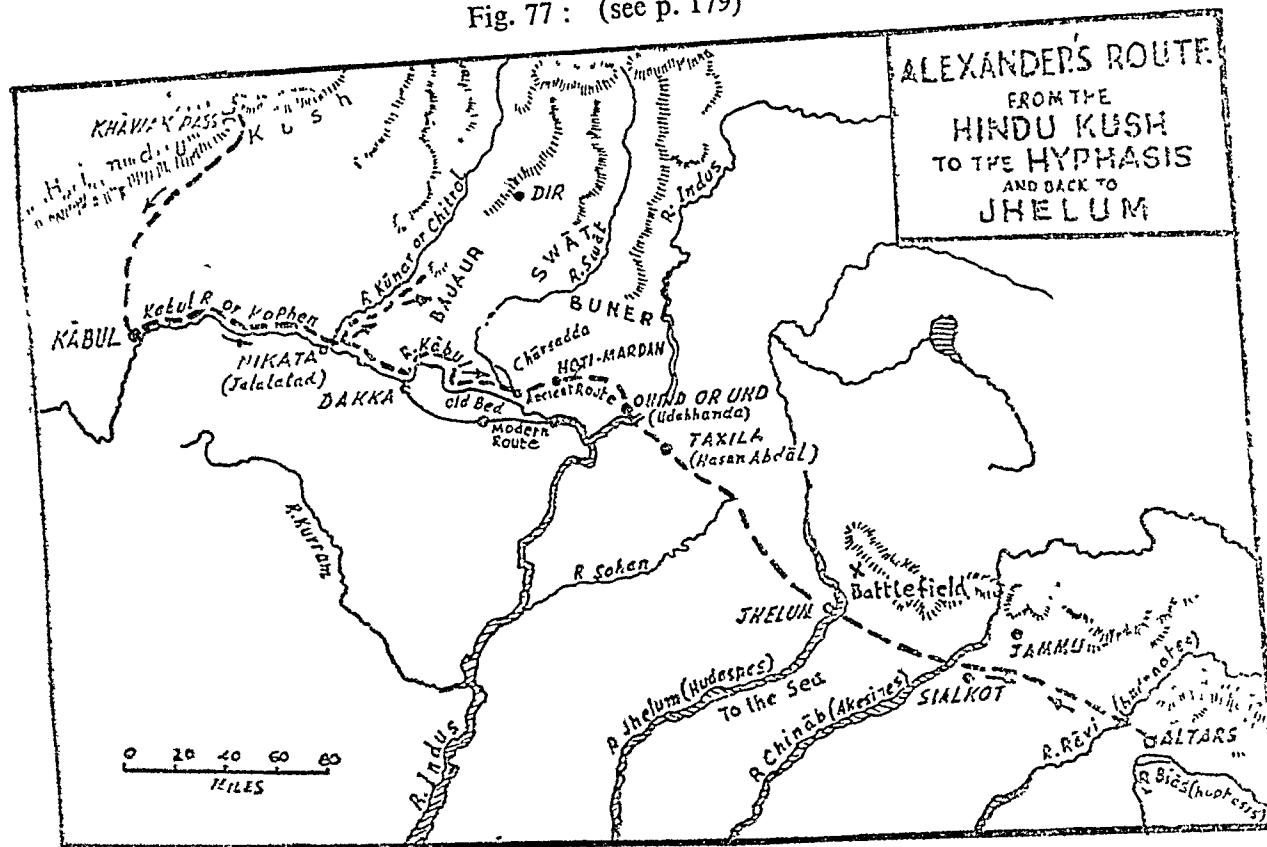


Fig. 76 : Map showing Satrapies of the Achaemenian Empire in the time of Darius  
(see p. 169)

Fig. 77 : (see p. 179)



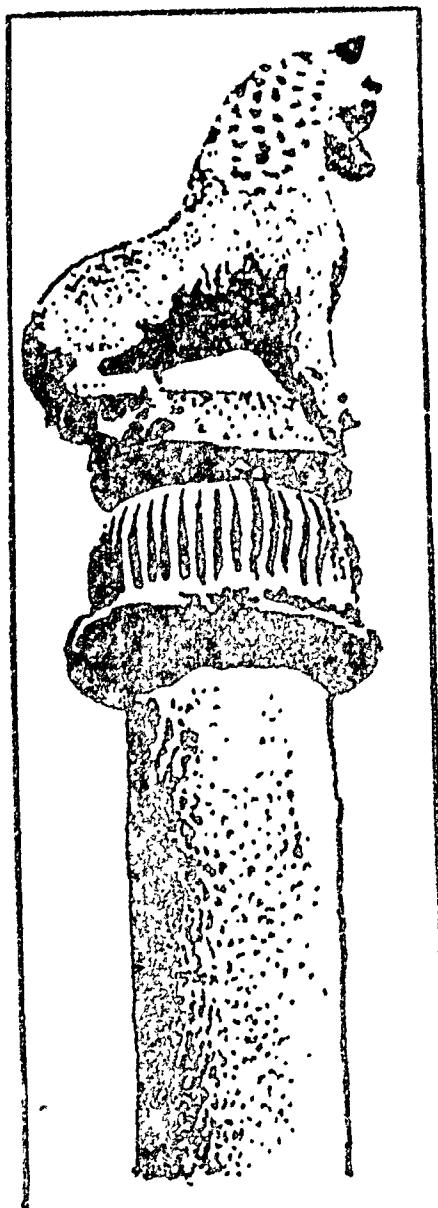


Fig. 78 : Lauriya Nandangarh Capital (see p. 196)

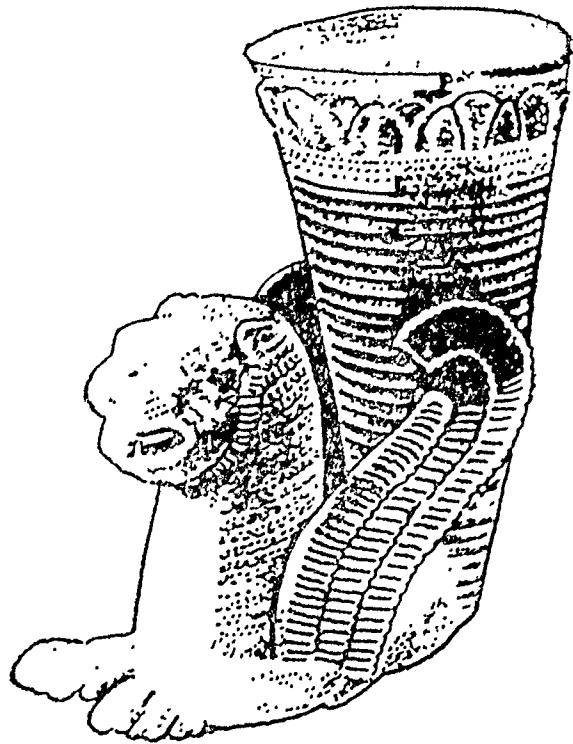


Fig. 79 : Gold Rhyton, Hamadan  
(see p. 196)

Fig. 80 : Achaemenid Campaniform base

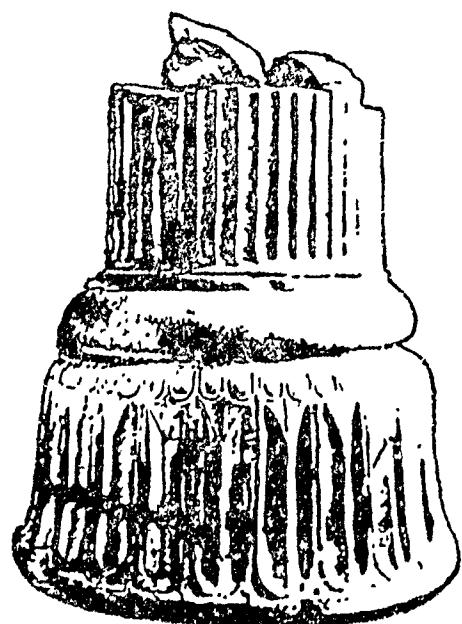


Fig. 81 : Sarnath Lion Capital  
(see p. 196)



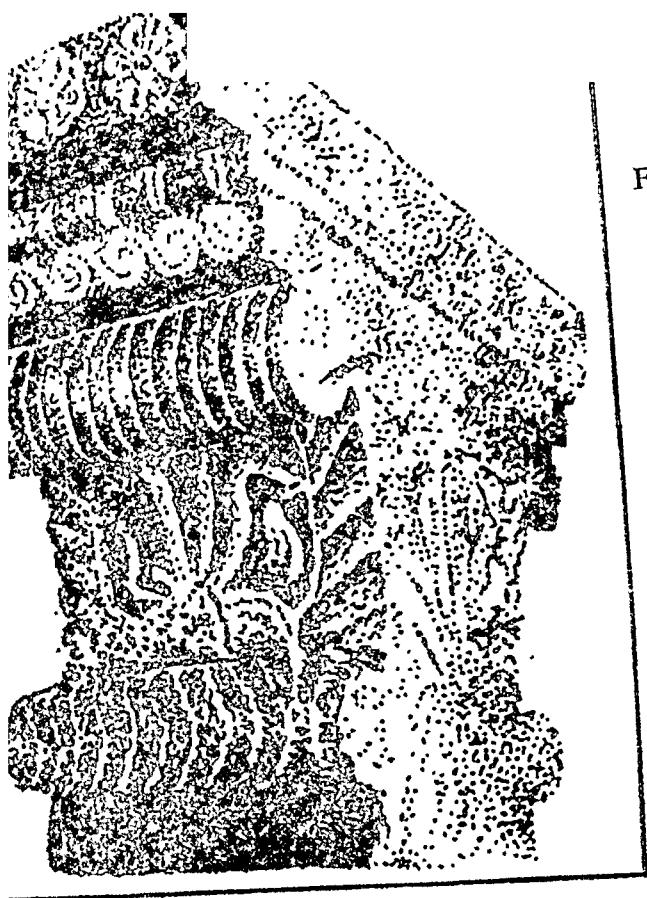


Fig. 82 : Capital, Pataliputra  
(see p. 197)

Fig. 84 : Griffin, Pataliputra  
(see p. 199)

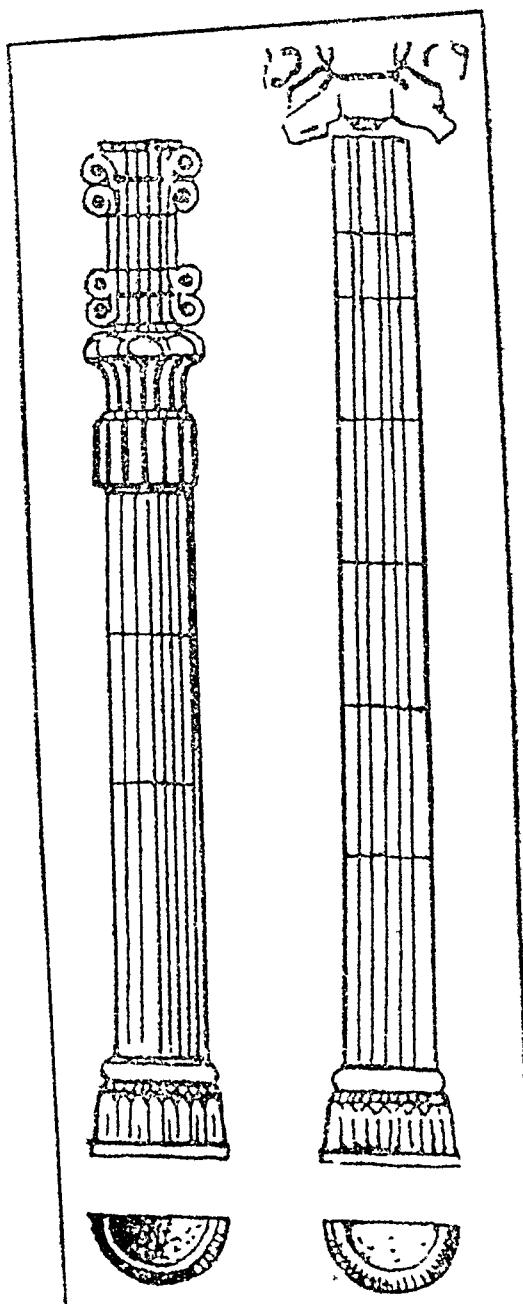


Fig. 83 : Column types, Persepolis  
Apadana (see p. 197)

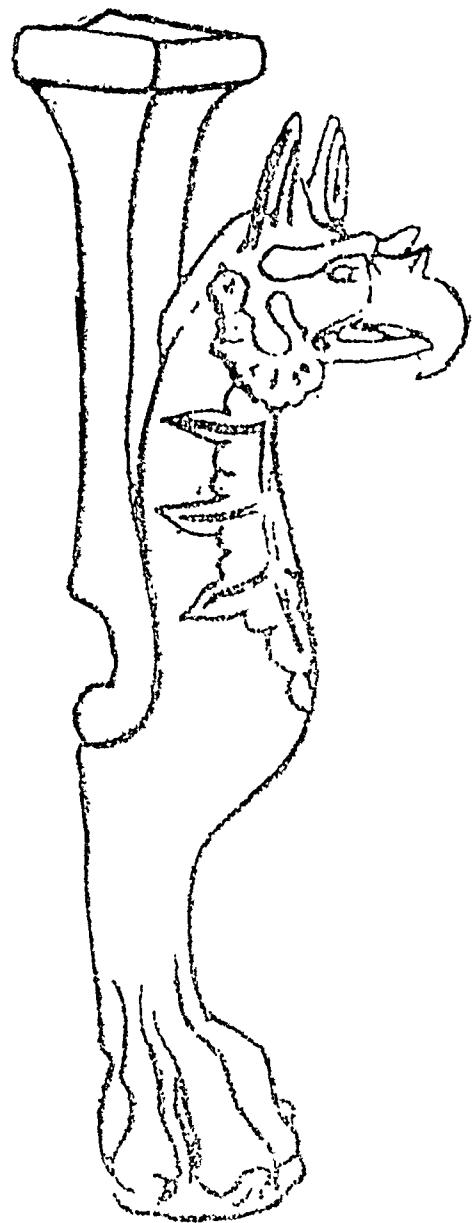


Fig. 85: Persian Bronze leg, Achaemenid  
(see p. 199)

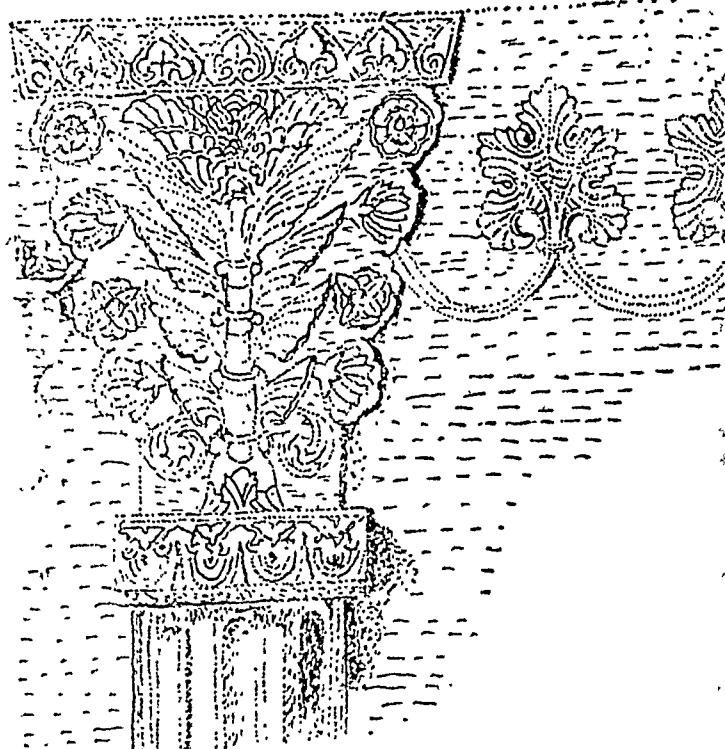


Fig. 86 : Detail of a capital in  
basrelief Taq-i-Bustan  
(see p. 197)

CHART SHOWING TENTATIVE CORRELATION OF OLD STONE AGE CULTURES OF INDIA,  
CENTRAL ASIA, PAKISTAN AND AFGHANISTAN

Central Asia Republics	Pakistan		India		Afghanistan Samangan Valley Puglisi
	Soan Valley	Peshawar Valley	Sutlej Valley	Saraswati Valley	
Ranov	De Terra & Paterson	Paterson and Dani	Lal and Mohapatra	Krishnashwami & Gupta	
Karasu Stage	Late Upper Palaeolithic or Evolved Soan	Final Soan Upper Clac- ton (Punjab)	Banganga T <sub>4</sub> Assemblage		Hazar Sum Assemblage
Kara Burni Stage	Late Soan B	Upper Soan B Upper Clacton (Punjab) A	Sanghao Cave B Assemblage	Banganga T <sub>3</sub> Assemblage	Nālagarh Middle Terrace Assemblage
Tokaly Stage	Late Soan A	Upper Soan A		Banganga T <sub>2</sub> Assemblage	Bilaspur T <sub>3</sub> Assemblage
	Early Soan C	Middle Soan B		Banganga T <sub>1</sub> Assemblage	Nalagarh Upper Terrac Assemblage

## A. STONE AGES

According to Rajaguru the Early Stone Age tools in different regions should be placed as follows:

- (a) From N.W. India —Middle Pleistocene.
- (b) From C. Narbada, —Late Middle/Early Godavari, Krishna Upper Pleistocene. rivers
- (c) From Tamilnadu —Probably Middle area Pleistocene.

The following dating is based on the K-Ar and C<sup>14</sup> dating, and extrapolation :

- (i) Plio-Pleistocene —2 to 3 million years. boundary
- (ii) Early Stone Age —Anywhere between 1 million to 30,000 years B.P.
- (iii) Middle Stone Age —c. 30,000 to 10,000 years BP. (with a probability of an earlier beginning).
- (iv) Late Stone Age —c. 8,000 to 2,000 BC.
- (v) North Western Neolithic —c. 3,500 to 1,500 BC.
- (vi) Kashmir Neolithic —c. 2,400 to 1,500 BC.
- (vii) Bihar Doab Neolithic —c. 1,800 to 1,200 BC.
- (viii) Bihar Plateau Neolithic —c. 1,000 to 600 BC.
- (ix) Southern Neolithic —c. 2,450 to 1,000 BC.

## B. CHALCOLITHIC CULTURES

The date-brackets based on the archaeologic data and the C<sup>14</sup> dates are given separately, wherever possible.

- (i) *Phase C Cultures*  
(Anjira II, Mundigak I, Rana Ghundai I etc.)  
Archaeologic —c. 3300-3000 BC.  
C<sup>14</sup> Dated —c. 3200-2800 BC.
- (ii) *Phase D Cultures*  
(Amri I and II, Mundigak II, Anjira III etc.)  
Archaeologic —c. 3000-2700 BC.  
C<sup>14</sup> Dated —c. 2800-2600 BC.
- (iii) *Phase E Cultures*  
(Cultures preceding the Harappans)  
Archaeologic —c. 2700-2400 BC.

C <sup>14</sup> Dated	—c. 2600-2400 BC.
(iv) <i>Harappa Culture</i>	
Archaeologic	—c. 2350-2000 BC.
C <sup>14</sup> Dated :	
Nuclear Regions	—c. 2300 or earlier to 2000 BC.
Peripheral Regions	—c. 2200 to 1700 BC.
(v) a. Shahi Tump	—c. 2000-1900 BC. (archaeologic)
b. Jhukar	—c. 1900 BC. (archaeologic)
c. Jhangar	—c. 900 BC. (archaeologic)
d. Cemetery-H	—c. 1750-1400 BC. (archaeologic)
(vi) a. Kayatha Culture	—c. 2000-1800 BC. (C <sup>14</sup> dated)
b. Banas Culture	—c. 2000-1400 BC. (maximum) (C <sup>14</sup> dated)
c. Malwa Culture	—c. 1700-1400 BC. (C <sup>14</sup> dated)
d. Jorwe Culture	—c. 1400-1100 BC. (C <sup>14</sup> dated)
(vii) O.C.P. Culture	—c. 1800-1400 BC. (Thermoluminescent dated)

## C. IRON AGE CULTURES

- (i) Swat Graves —c. 1000 BC. (C<sup>14</sup> dated)  
(Ghalighai Pd V)
- (ii) Baluchistan Cairn Graves —c. 900-800 BC.  
(Archaeologic)
- (iii) Pirak Iron Age —c. 800 BC. (C<sup>14</sup> dated)
- (iv) P.G. Ware —c. 800-350 BC. (C<sup>14</sup> dated)
- (v) N.B.P. Ware —c. 550-50 BC. (C<sup>14</sup> dated)
- (vi) Black-and-Red Ware (with iron) —c. 700 BC. (C<sup>14</sup> dated)
- (vii) Peninsular Iron Age Beginning —c. 1000 BC. (C<sup>14</sup> dated)
- (viii) Vidarbha Iron Age Beginning —c. 600 BC. (C<sup>14</sup> dated)
- (ix) Megaliths —c. 1000-100 BC.  
(C<sup>14</sup> dated)